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ABSTRACT

The Casco Bay (Maine) Partnership for Workplace Education was a federally funded workplace literacy program that provided customized basic skills education at seven business sites in the Portland area. The partnership served more than 2,000 employees from 1993-96. Program characteristics included the following: ongoing and self-directed learning; work-related skills development; holistic, competency-based instruction; and workplace education courses offered on site, at convenient times, in small classes, by well-trained adult educators. A review of the project summarized activities from November 1994 to June 1997. Findings were as follows: (1) the partnership went beyond superficial workplace literacy designs, resulting in an innovative approach to project management, context-sensitive operations, and lasting and growing partnership relationships and an expanding sphere of influence at local and national levels; (2) project staff and instructors gave highest priority to the learner, producing high rates of successful course completion, innovations in work-related curriculum and teaching strategies, and energetic learners ready to take charge of their own learning; (3) by building a foundation for ongoing learning in six partner companies, the partnership positively influenced routine operations and workplace climate, contributed to system changes that varied by business, and generated momentum for ongoing learning in participating companies; and (4) this workplace education project highlighted some major challenges and continuing issues. (Contains 22 references.) (KC)

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ED 426 220

CASCO BAY PARTNERSHIP FOR WORKPLACE EDUCATION

THE VOICES OF LEARNERS AT WORK

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Project Award # V198A40203

Final Evaluation Report
October 1997

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OVERVIEW/
EXECUTIVE SUMMARY

In November 1994, the Casco Bay Partnership for Workplace Education (CBP) linked the University of Southern Maine with seven Portland-area businesses. During a three-year project, funded by the U.S. Department of Education's National Workplace Literacy Program, CBP delivered educational services at each business site.

In the summer of 1997, five business partners planned to maintain the program beyond the grant period. These votes for continuity, backed by budget allocations, stand as solid evidence of the effectiveness of this demonstration project.

The seven business partners included local family-owned companies as well as international public corporations. They ranged in size from 120 to 1400 employees. As noted on p.15, the majority were engaged in manufacturing.

Each partnership reflected unique features of the participating company. This report describes various aspects of the collaboration. To emphasize that any comments are selected descriptions of project operations rather than broad judgments of any company, business partners are not identifed by name in the following pages.

Because budget reductions significantly reduced course offerings in the final four months of the project, this report summarizes activities from November 1994 to June 1997, the thirty-two months of full-scale operation in classrooms.

PART ONE

ORGANIZING WORKPLACE INSTRUCTION

General Finding. The Casco Bay Partnership for Workplace Education went beyond superficial rubrics of workplace literacy designs in order to learn, innovate, and improve on traditional practices. The results have been:

- an innovative approach to project management;
- context-sensitive operations in partnership companies;
- an evolving role within the university;
- lasting and growing partnership relationships and an expanding sphere of influence at local and national levels..

Project initiatives created a context for dynamic and interactive learning at all levels of operation.

Part One describes the project team, the various contexts in which it operated, and innovative processes and products.

The project director comments:

We're all relearning our jobs every few years and my own work is no exception...I've had to retool, reskill, upgrade, and professionally develop in numerous areas. The approach that carried me through is the same one that continues to guide Casco Bay Partnership programs: active learning that applies new skills to changing demands.

PART TWO

INSIDE THE CLASSROOM

Participants comment

on course materials:

Were very good, they used lots of examples and allowed us to participate;

Very helpful--plenty of it will be used to enhance learning after classes are completed.

Everything we needed, we had.

on instructors:

Gave me more chances to have to express my own views at my own ability.

Patient, also kept the class focused and positive.

Fantastic. Could open my eyes and set my mind running even on the worst of days.

Best instructor I've ever had--bar none.

General Finding. Project staff and instructors gave highest priority to the learner-- as a person with individual resources, priorities, and needs. Both curriculum and instruction aimed to engage the whole person and to provide opportunities for individuals to integrate their learning.

This sensitivity to the learner produced:

- high rates of successful course completion;
- innovations in work-related curriculum and teaching strategies;
- energetic learners ready to take charge of their own learning.

In a more general way, this focus on integrated holistic learning erased traditional boundaries between general education and work-specific training, between personal growth and technical mastery, and, at a subtle level, between learner and teacher.

Part Two reports on participants, their classroom experiences, their instructors, and curriculum materials.

PART THREE

BEYOND THE CLASSROOM

Typically workplace learners integrated new knowledge and skills in traditional curriculum areas with new knowledge and skills in the personal and interpersonal arenas. They took charge of their learning and seized the initiative in applying this learning in the workplace.

Their managers formed judgments about the workplace education program by "walking about"--watching and listening. They heard reports from supervisors, observed interactions on the floor, exchanged comments with participants in corridors or over coffee.

General Finding. By building a foundation for ongoing learning in six partner companies, the Casco Bay Partnership for Workplace Education:

- positively influenced *routine operations and workplace climate;*
- contributed to *system changes* that varied according to the character of the business;
- generated momentum for ongoing learning in participating companies.

The project achieved its most visible successes where company philosophy and mission matched project commitments.

Part Three describes ways in which project participants integrated and applied their learning and the ripple effects in partnership organizations.

Managers comment:

CBP helped our mechanics become technicians, so they can play their part in keeping [this company] an industry leader. They aren't limited to "turning a wrench;" now they are involved in department planning, talking with vendors, decision making. The responsibilities are shared which means that projects get out the door faster.

In this industry, we have to learn at a faster pace. People who have taken courses have the confidence to go on. Changes do not bother them. They have more information and are ready to change. So confidence yields greater confidence.

Employees who have attended classes are able to solve problems on their own without tieing up supervisors' time which allows us to concentrate on improving production methods.

CBP is part of our culture now.

PART FOUR

BEYOND THE WORKPLACE

The Casco Bay Partnership for Workplace Education is currently making a shift from a grant-supported operation to a university-based, entrepreneurial venture. Each project achievement produced a spiral of learning that has implications for future directions of the project, for businesses engaged in workplace education, and for higher education.

General Finding. This workplace education program highlighted some major challenges and continuing issues:

- the management of workplace instruction requires focused attention on new roles, competencies, and information systems;
- educational initiatives require further refinement of curriculum and instruction to support self-directed learning and shared decision making;
- assessments of return on investments in workplace education invite careful scrutiny of both economic and social values.

Part Four addresses selected managerial, educational, and value issues.

Margaret Wheatley comments:

We need to learn more about this "interweaving of process" that leads to structure. In ways we have never noticed, the whole of a system manages itself as a total system through natural processes that maintain its integrity. It is critical that we see these processes. It will shift our attention away from the parts, those rusting holdovers from an earlier age of organization, and focus us on the deeper, embedded processes that create whole organizations (p.118).

Leadership and the New Science

PART ONE

ORGANIZING WORKPLACE INSTRUCTION

I. The Project Team

Three features of the operation contributed to success:

1. a network for cross-site support;
2. on-site visibility and credibility;
3. continued upgrade of information system and feedback loops.

II. Business Partnerships

Three factors contributed to positive relationships with business partners:

1. a match of philosophy and mission;
2. agreement on operating guidelines;
3. resilience and resourcefulness.

III. The University Partnership

Two factors defined the role of the University of Southern Maine as partner:

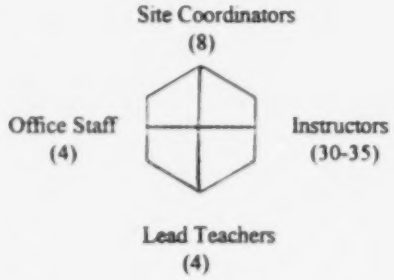
1. administrative support and access to institutional resources;
2. initiatives for cross-departmental collaboration.

IV. The Larger World of Workplace Education

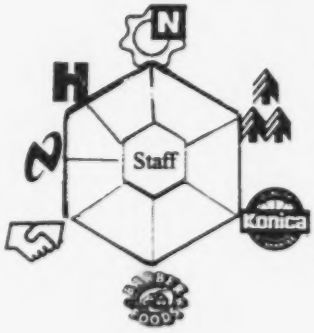
Project staff used multiple strategies to network with colleagues and businesses at local, regional, and national levels.

Casco Bay Partnership for Workplace Education

CORE STAFF AND INSTRUCTIONAL STAFF



NETWORK: SEVEN SITES



PART ONE

ORGANIZING WORKPLACE INSTRUCTION

I. The Project Team

Team members of the Casco Bay Partnership for Workplace Education designed a web-like structure to support a diffuse operation. Through the role of site coordinator they established visibility and credibility at each business site. They also upgraded information and feedback loops.

1. A Network for Cross-site Support

The sixteen members of the project core staff functioned as an interactive network to carry out project responsibilities and support the instructional staff.

The core staff met regularly to assess progress, report on promising practices, identify logjams, and, in general, to pool good ideas and problem-solving strategies. They used e-mail for timely communication. The project director met individually with staff for performance reviews and for ad hoc planning or problem-solving sessions.

After an initial orientation session, instructors rarely met as a total group. They met with site coordinators to handle administrative details. They met across sites with lead teachers in their curriculum area to update course designs, materials, and teaching strategies. Several instructors also worked on research projects. Project staff provided support through classroom observations and feedback sessions.

This "web of dynamic interaction" sustained common purpose, momentum, and productivity.

Site Coordinator Functions

- *develop knowledge of the company structure, training needs, expected outcomes;*
- *conduct needs assessment of competencies required for targeted jobs;*
- *design and develop customized curriculum and instructional material;*
- *coordinate, monitor, and provide support for instruction;*
- *establish and coordinate the work of the advisory committee;*
- *manage class schedules and locations, publicity, recruitment;*
- *maintain records for enrollment, feedback, and evaluation;*
- *prepare reports for company and project use;*
- *recommend improvements for instruction or program management.*

2. On-site Visibility and Credibility

The role of site coordinator was an innovation for this project. In addition to teaching at least one course, coordinators carried out a range of managerial tasks.

Because all eight site coordinators had been instructors in a prior eighteen-month workplace education program, they were familiar with the project and experienced in delivering instruction at the worksite. The new coordinator role required a shift in perspective--from instructor to manager of instruction. The role also required a new repertoire of skills and thus positioned coordinators as both learners and leaders.

Sensitive to context, coordinators established collaborative relationships with managerial staff, particularly those in personnel and training functions. Drawing on resources of strong interpersonal skills and reserves of patience and persistence, they used a variety of strategies to heighten worker awareness of opportunities for personal development and to increase the comfort level of prospective participants.

Coordinators had to "invent" their roles to adapt to the culture of each site. This was essentially a learning process, with different results at different sites. Their presence, however, gave visibility to the project and their performance built credibility for the project at each site.

3. Continued Upgrade of Information System and Feedback Loops.

The project team mounted four major initiatives to improve information flow.

(1) Project Database. Data collection instruments prescribed by the National Workplace Literacy Information System [NWLIS] proved cumbersome and time-consuming. More significantly, reports were not useable at the site level.

To meet project needs, the director enlisted a volunteer to design and install a comprehensive database--tracking variables for participants, courses, and instructional outcomes. It served, in effect, as a secondary data collection system serving the needs of the project.

When NWLIS was canceled in May 1996, the secondary system immediately became the primary database. The project director's early initiative forestalled disruption and ensured a smooth transition to more effective data collection.

(2) Site Reports. To increase information flow at each site, in 1996 coordinators began to publish Site Reports. The Reports varied across sites in format, style, and time of publication. They all drew on the project database to present patterns of enrollment, courses, or schedules. Many reported activities of the advisory committee as well as priorities of management. In some sites, they served to encourage enrollment in the next instructional cycle; in others, they provided a retrospective of the year.

CBP Program Database

1. **Participant Data:**
   name; SS#; address; M F; age; ethnicity; shift; years at company; course enrollment completion.

2. **Instructor Data:**
   name; SS#; address; M F; type and # courses taught

3. **Learner and Program Outcomes**
   course results
   feedback on program
   feedback on instruction

   Reports on all items:

   by company
   by instructional cycle
   by curriculum strand

1997 Feedback on Program:
Sample Questions

Scale: 1 = Very Unsatisfactory
5 = Very Satisfactory

3. The committee tries to make it easy for employees to enroll in courses. *How would you rate the process of signing up for courses?*

7. The committee tries to find ways to recognize the achievements of participants. *How would you rate the recognition you receive for your achievements?*

1997 Feedback on Instruction:
Sample Questions

Scale: 1 = Poor; 5 = Outstanding

Confidence: To be a successful learner, it is important to feel confident that you can learn.

How well did the teacher help you feel confident in your ability to learn?

How well did the teacher encourage you to try new things?

How well did the teacher help you express and engage your feelings?

How confident are you in your ability to learn?

(3) Participant Feedback Instruments. Two instruments were used in 1995 for formative evaluation after each cycle of instructional. Forms for feedback on program and on instruction used both rating scales and open-ended questions. Although the forms yielded rich material, they could not be analyzed in time to influence the next cycle. In the spring of 1996, coordinators and staff volunteers redesigned and field-tested new instruments.

The instrument for Program Feedback was designed as feedback for the advisory committee. It asked for ratings on nine committee responsibilities.

The instrument for Feedback on Instruction was designed to parallel the competencies of teachers and with those of adult learners. Fourteen questions asked for assessments of teacher performance; six questions asked for self-assessments.

Both instruments provided space for comments on each item. Forms were field-tested in 1997 to prepare for final revision.

(4) Site Needs Assessment. Protocols used for initial needs assessment at each site were reviewed and redesigned. Based on interviews and job shadowing, the company profile highlights corporate and employee strengths, as well as challenges and immediate educational needs. The report prepares companies to set realistic learning priorities and establish program objectives.

Initiatives of the CBP project team resulted in new structures, new functions, and new types of documentation to support the delivery of instruction in the workplace.

II. Business Partnerships

The project philosophy affirmed two basic values: learner-driven instruction and participation at all levels from classroom to program. At each site, business partners and advisory committee members reviewed project priorities and prepared a mission statement appropriate for their organization.

1. A Match in Philosophy and Mission

Translating mission into practice served to test the fit between company and project priorities. Two examples showed sharp contrasts. One business partner, a complex and expanding food processing operation, made a vocal and visible commitment to the workers. Space problems were solved by portable classrooms; graduations were company celebrations; participants' successes were seen as company successes. In contrast, a company carrying out a routinized processing operation registered minimal concern for its workforce--predominantly female, working irregular, uncertain hours. Although the company joined as a partner, no efforts were made to encourage enrollments or adjust work schedules; no workers were on the advisory committee and few classes were offered. This was the single partnership judged a failure.

A manager comments on company philosophy:

Our philosophy is to recognize employees as a resource. They have a wealth of information. The key to success is to tap into that resource and use it to benefit the company, to improve processes, to make us more competitive.

It is not easy to prejudge the odds for a productive partnership. Each partnership is a continuous learning experience--leading sometimes to termination, sometimes to continuation or expansion. The major determinant of the quality of the relationship and its outcomes is the level of a consensus between sponsor and provider on philosophy and mission.

2. Agreement on Operating Guidelines

Drawing on research evidence of factors contributing to successful programs, the Casco Bay Partnership set guidelines for operations. Business partners agreed to voluntary worker participation; onfidentiality; alternatives to standardized testing; and on-site instruction within the work schedule. At the close of the grant, managers reaffirmed the guidelines: *No problem with these.* One proposed a new guideline for a minimal class size.

(1)) Voluntary participation. This is a defining requirement, differentiating the project from required training common in the workplace. Because the classroom "agenda" is not prescribed by management, it supports the self-directed learning model and it registers company confidence in workers to "self select" into classes.

Enrolling in courses presented many non-traditional learners with an opportunity to take a first step--to actively engage in new learning. For some, this meant overcoming fears and self-doubt. One manager spoke of the challenge: *Some people hadn't been back to school in a long time. It took courage to go forth and they found out "I can do it....It's not so bad.*

Voluntary participation runs the risk of "creaming," drawing those ready to participate. But each new cycle brought new enrollees. Both directly and indirectly, participants encouraged co-workers. A manager noted: *There's some spinoff--encouraging others.... It takes word-of-mouth that says: "You can get through."* Workers successfully completing courses served as role models for others.

Two managers comment on voluntary worker participation in basic skills courses:

Any other way would change the whole character.

Most are helped. Some don't need the courses, but go. Others need help but don't go.... Both of these groups are small....There's no way to deal with it short of imposing an edict, making it mandatory, and that would defeat the whole purpose.

(2) Worker participation in planning and implementation. In the initial planning stage, workers contribute directly to the program design by participating in interviews to assess needs and analyze tasks. These activities introduced staff, threw light on specific features of work life, and set the stage for classes. This formal and informal exchange of information continued throughout the project.

The signature forum for worker participation, however, was an advisory committee at each site. An open invitation was extended to workers to join the advisory committee and efforts were made to ensure that various units of an organization were represented. At the five larger sites, committees had between eight and twelve members, including one or two human resource personnel representing management. One small site had one worker representative; the other had none.

At monthly meetings, working with the site coordinator, advisory committees planned the instructional program and assisted in managerial tasks, such as recruitment and publicity. Different committees assumed different levels of responsibility. In one site, for example, the committee took special pride in pushing for a sign language course (not a standard course) that they judged important in their workplace. In general, in six companies worker participation in site advisory committees established workplace education as a valued service. As shown in Part Three, employees gave high ratings to their arrangements for the courses.

A manager comments on the advisory committee:

They were all workers, except one permanent senior staff. They handled everything. They helped communications and spearheaded the effort. There was little negative impact on production because they met at 6:00 A.M. so that night-shift members could participate.

Advisory committee members rate key areas for skill improvement:
(Spring 1997 Survey; 22 respondents)

Communication
Teamwork
Flexibility
Organizational Skills
Ongoing learning

and comment on their learning:

Public speaking has always been difficult for me. Serving on the committee has been another opportunity for me to think and to speak in a group environment.

Being on this committee has given me the confidence to pursue outside education.... currently enrolled in a degree program.

Used experiences to drive results at meetings by staying focused...and to continue develop skills in allowing for individual differences when group consensus is required.

In workplace as a member of AC, I have tried to educate people that it is never too late to go to school.

More creativity and communication to others outside my immediate work area now exists. I will not give workplace education or being as AC member all the credit but I feel my continued learnings and practicing the roles given as an advisory member have helped improve my abilities and my confidence to step outside the envelope of my comfortable small world into the universe as it unfolds itself to me, fearing what is to come less and less.

Roles on advisory committees also contributed to skill improvement for members. Volunteering for this role was in itself evidence of some level of confidence and initiative. In the Spring 1997 Survey, committee members reported additional skills gained. Seventeen respondents provided examples of specific ways in which they applied their new skills-- in workplace education, on the job, and elsewhere. They saw service on an advisory committee as a learning experience.

(3) On-site instruction within the work schedule. All business partners agreed to offer courses on-site--eliminating time and costs for travel. There is evidence that offering classes within the work schedule decreases the burden on students and contributes to high course completion rates. Six business partners customized class schedules to adjust to the constraints and practicalities of operations and production. (Implications of these schedule variations are discussed in Part Two.)

(4) Confidentiality for individual records and alternatives to standardized testing. To reduce worker fears that classroom performance might impact job security or promotion, all business partners agreed that contents of individual coursework or test scores would be confidential. Because of the lack of fit between standardized tests and job performance or job-related curriculum, business partners also agreed to accept non-traditional measures of class achievement. Efforts to develop alternative outcome indicators are reviewed in Part Two.

These guidelines, clearly stated at the outset, provided a basic consensus for operations.

Table 1
Profiles of Seven Businesses

	Industry; Product/ Service	Type; # local sites	Changes; Special Features
1	Mfg: tool/ dies	internt'l; 1 site	new owner in 1997
2	Foods: frozen entree preparation	local; family-owned; 2 sites	continued expansion 1995-97
3	Retail food: supermkt warehouse	regional; 2 sites	unionized in 1996; seasonal pressures
4	Service: film processing	regional; 1 site	seasonal pressures
5	Mfg: microchips	internt'l; 1 site	split into two companies in 1997
6	Mfg.: machine component	internt'l; site	mgmt. changes
7	Mfg.: construction components	regional; 2 sites	seasonal pressures

3. Resilience and Resourcefulness

Customized arrangements for class schedules demonstrated project flexibility in responding to business constraints and priorities. All courses not offered within work shifts had to be scheduled one or two hours before or after work shifts. As a result, instructors met some students as early as 6 A.M. and as late as 11 P.M.. On a broader level, each site presented a different profile--of mission, organization, size, worker population, and culture.

During the life of the project, each company experienced major-- in some cases, disruptive--external or internal pressures. While many of these had a general unsettling effect on the general climate (and therefore on classes), some effects were more concrete.

Management changes in three companies, for example, meant that sponsors oriented to the project moved to different positions and relationships needed to be built anew. In one company, this management change led to withdrawal from the project and triggered a search for a new partner. Another company was marked by strained labor-management relations and yet another faced months of tension as it split into two separate entities. Even simple shifts, such as business expansion, could strain physical resources and jeopardize space allocated for classes. Despite the unexpected and unpredictable, despite seasonal demands or organizational crises that reduced attendance, classes continued without disruption. This stability confirmed the value of the educational program to business culture and operations.

Project staff was also proactive in responding to emerging opportunities. In all companies, increased use of computers and new technologies produced a demand for computer instruction. Because courses for computer skills were outside the scope of project guidelines, staff and instructors created a range of courses in math and writing that used computers as a tool for instruction. As noted in Part Two, these courses produced stellar results in classroom performance and work-related products.

Similarly, in the early months of the project when the international headquarters of one company called for the development of competency models for various job categories, project staff assembled a team to work with company staff on a prototype model. As work on competency models continued under company aegis, CBP staff used this experience as a resource in developing expanded indicators of learning outcomes.

These few examples of pressures and possibilities highlight the dynamic character of workplace education, the limitations of prior and narrowly defined activities, and the central importance of staff flexibility.

In business environments where "the unexpected is expected," project staff patiently addressed unanticipated constraints and nimbly seized emerging opportunities.

Staff Initiative:
Computers as a Learning Tool

Curriculum Objectives:

- *to practice word processing, spreadsheets, databases*
- *to enhance writing and presentation skills*
- *to use Internet and e-mail*
- *to use educational software as a personal tutor*
- *to identify distance learning opportunities*

III. The University Partner

Building partnerships in the corporate sector requires a deft balancing of firm purpose and elasticity--it is an art rather than a science. Building a partnership within higher education is equally challenging because a workplace education project introduces several innovations: non-traditional off-campus sites, non-traditional instructors and curriculum, and non-traditional students. Both strong sponsorship and initiatives for collaboration characterize such a partnership.

1. Administrative Support and Access to Institutional Resources.

The original eighteen-month proposal for the Casco Bay Partnership for Workplace Education was designed by faculty of one program of the University of Southern Maine's College of Education and Human Development. As the project quickly demonstrated its interdisciplinary character, the dean of the college played a pivotal role in building cross-departmental links. For the three-year project, he served as principal investigator and participated in CBP advisory committee meetings and events.

The dean of USM's College of Education and Human Development comments:

I wanted to help it [CBP] become more part of the grain of the school--perceived as integral rather than peripheral.

As internal sponsor, he took several concrete steps to heighten project visibility and credibility. The simple action of issuing invitations to CBP staff to participate in college meetings and discussions helped to create a broader awareness of the initiative. A project report at the 1997 faculty retreat, for example, provided a formal opportunity for non-involved faculty to see the fit between the direction of the college mission and the partnership mission. In assigning space for the project, he tried to balance

faculty claims and project staff needs. As activities expanded, he arranged for space-sharing with willing faculty. Although such arrangements were not optimal for a full-time project with an extended staff, the dean saw the subtle benefits of such collaboration with faculty. Recognizing the links with the professional interests of faculty in various programs, he encouraged their participation in the project.

Finally, the university in-kind contribution to the project included a quarter-time faculty member. As a transitional step at the termination of the grant, he transferred this allocation to the college budget, extending the formal faculty role until the end of 1997. Both directly and indirectly, the dean championed the project.

As the project gained recognition, central office administrators also found ways to demonstrate support. The president arranged for a presentation at a meeting of university Corporate Partners; the vice-president in the Office for University Advancement supported the search for continuation funding; the provost assisted in linking the "*Writers at Work*" publication to a university-wide writing initiative.

During these years, USM's president engaged the university community in honing a vision for its future as a comprehensive public university. Workplace education presented an arena for demonstrating these commitments, so CBP fit comfortably within institutional priorities. Despite a position at the margins of academia and the inevitable struggle for scarce resources, this alignment with university priorities helped to stabilize the project in the academic context.

The president of the University of Southern Maine describes features of a comprehensive public university:

...sharing of knowledge to improve people's lives and the life of our community.

...involvement in the challenges and context of our region.

University of Southern Maine
College of Education
and Human Resources

Faculty Advisory Committee:
Cross-Departmental Representation

Office of the Dean
Adult Education Program
Literacy Program and
ESL Concentration
Teacher Education Program

2. Initiatives for Cross-Departmental Collaboration.

The university partnership was solidly supported by the staffing patterns for the project. Interested faculty played a critical role in the personnel selection process by publicizing job openings and recruiting outstanding candidates. Of twelve staff members (core staff, coordinators, and lead teachers), seven were recent graduates of or current students in graduate programs of the College of Education and Human Services. Approximately 60% of the instructional staff had similar graduate program ties.

Other initiatives also strengthened this collaboration. During the final year of the project, for example, project staff mentored nine graduate students teaching as classroom aides and assisted ten graduate students in internships or research projects. In addition, one faculty member joined the instructional staff to teach two courses in cross-cultural understanding. Benefits flowed both ways in this informal network as faculty and project personnel exchanged information and resources.

More formally, five faculty members from three graduate programs served the project on a college advisory committee. The committee was intended to be an oversight group--to review and recommend policy and practice. For a variety of reasons, the committee met only sporadically for official sessions and never developed a focused mission. Faculty and project staff were busy--with a range of demanding, time-consuming duties. At a pragmatic level, both groups followed different daily and monthly schedules--they were simply not always on campus at the same time.

Three members of the committee, however, made major contributions to the project in alternate ways. A faculty member in the Literacy Program initiated a tutorial to study instructional strategies for ESL students not literate in their native language. A faculty member of the teacher education program engaged fifteen instructors in a major research project on the Portfolio Process (described in Part Three).

One member of the advisory group from the Adult Education program served as project consultant--a university in-kind contribution. At staff meetings she coached in group process and managerial skills. Working with special project teams, she provided technical support for the revision of instruments for organizational needs assessment and formative evaluation. As the project staff investigated ways to continue workplace education beyond the federal grant, she offered both leadership and support. Because of her proposal writing experience, she eased access to university personnel and resources for proposal development. Because of her commitment to the workplace education project and her faculty affiliation, she served as advocate and spokesperson for the project inside and outside the college.

As a non-traditional system for the delivery of instruction, workplace education activities do not offer traditional academic incentives or rewards. The field is new, so research horizons have minimum prestige. The atypical learner population requires innovative strategies for instruction. Given such constraints, systematic and long-term efforts are necessary to formalize and expand the role of the university as a partner in workplace education.

Casco Bay Partnership for Workplace Education

Faculty Initiatives

- *Course Instructor: Cross-cultural Communication*
- *Field Research: Teaching Strategies for Non-literate ESL Participants*
- *Advisors for Interns and Graduate Research Projects*
- *Research Director: The Portfolio Process for Workplace Learners*
- *Technical Advisor for Staff Development and Grant Applications*

Casco Bay Partnership for Workplace Education

Staff Presentations 1996-1997

Local and Regional

USM Summer Institute

Maine Businesses for Social Responsibility

Portland Training Resource Center

Central Maine Technical College

Northern New England TESOL

National and International

Milwaukee, WI, Workplace Learning Conference

Los Angeles, CA, National Alliance of Business Conference

Cambridge, MA, National Portfolio Conference

Montreal, Canada. Symposium on Self-directed Learning: Past and Future.

IV. The Larger World of Workplace Education

Because workplace education is a dynamic, emerging arena for instruction, project staff developed multiple strategies to interact with colleagues.

Networking activities included participating in national and regional conferences, assembling a resource library, using listserves on workplace literacy and related topics, scheduling cross-site visits to other NIFL grantees, preparing project description packets, providing information to businesses and adult education programs, responding to weekly phone inquiries, and publishing seven issues of a newsletter *Casco Bay Partnership News.*

In August 1996, CBP sponsored a three-day regional institute in which 75 participants discussed issues and showcased promising practices in workplace education. The Casco Bay Partnership was also one of seventy nominees for the "What Works Literacy Partnership" award for excellence in adult literacy programming.

Summary: Coordinating Structures and Sensitivity to Contexts

As a new structure for delivering instructional services, the Casco Bay Partnership for Workplace Education wove an intricate web of non-traditional alliances. Orchestrating a range of widely-diffused activities called for a staff with firm grounding in priorities and values, sophisticated managerial skills, openness to diverse perspectives, an ability to adjust and accommodate while maintaining focus and direction. These requirements were met.

PART TWO

INSIDE THE CLASSROOM

I. Class Participants

Diverse features in the seven business sites influenced:

1. characteristics of class participants;
2. variations in curriculum offerings;
3. patterns for course enrollments and course completions.

II. Classroom Experiences

Participants registered their satisfaction with:

1. the convenience of program arrangements;
2. the effectiveness of advisory committee functions.

III. Instructor Performance

Three features distinguished the performance of instructors:

1. learner-focused instruction;
2. modeling behaviors of adult learners;
3. dedicated, flexible professionalism.

IV. Curriculum Materials

A participatory process for curriculum development produced:

1. appropriate and relevant materials;
2. context-sensitive curriculum;
3. multiple products for dissemination.

Participants reflect:

Before I arrived in the US, I stopped in the Philippines' camp for 6 months to learn English and the culture of America. There were terrible things I couldn't forget, sometimes they follow me in my dreams many times.

My husband was a very lucky man. They put him in the jail for a month, they didn't kill him, they let him go home free. Everybody worked hard but there was not enough food to eat. Everybody got sick, 80% died.

For the past two years I've raised Shayne [age nine] and worked a full-time job....There's a great deal of pride in our home....When our day starts at four a.m. and it's seven p.m. and dinner isn't cooked, I'm not showered, and I've just stepped into the puddle that [puppy]Sally left, I might forget being proud, But once I'm showered, dinner dishes are washed and Sally is on her runner, I'll remember.

Writers at Work, Fall 1995

Personal (family and health) problems kept me from putting as much energy into the class as I would have liked to.

I work two jobs and travel an hour to get to work.

I wish I could have put more time into it [classwork] at home.... been working long hours so it didn't let me put more time in.

1995 Participant Feedback

PART TWO

INSIDE THE CLASSROOM

Workplace education presents powerful evidence that ordinary people have extraordinary stories--past experiences or present challenges. When workers lift the veil of privacy, their vignettes often reveal reserves of courage, confidence, effort, resilience, and thoughtfulness.

Sensitive to the power of these experiences, CBP staff drew on them as a resource--inside and outside the classroom. Teaching strategies tapped prior knowledge and skills. With faculty support, instructors launched a "portfolio project" so individuals could examine and report on their progress. Employee participants made public presentations during local workshops or conferences and 150 of them published papers in the six issues of the project document, *Writers at Work*. Participants had many opportunities to add new chapters to their personal stories.

This emphasis on personal growth is rooted in traditional commitments of adult education to respect the dignity and uniqueness of each person. It affirms the right and responsibility of individuals to direct their own learning. The approach also fits with new discoveries of brain research--confirming and expanding ancient wisdom about individual similarities and differences, about delicate linkages between feeling and thinking. Science offers strong support for a focus on "the whole person" and on the potential for individual growth.

In Part Two, the spotlight falls on learners, their classroom experiences, their instructors, and their curriculum.

I. Class Participants

Diverse features of each workplace influenced the character of workplace education and its participants at each site.

Between November 1994 and June 1997, CBP offered 327 courses during eight instructional cycles. Typically a cycle extended for twelve weeks. Because of company seasonal pressures, cycles or courses ranged from four to ten weeks.

1. Characteristics of Participants.

During these eight cycles, 926 individuals enrolled in courses. Because many enrolled for several courses, total enrollment was 2062. Participants varied in age, ethnicity, and tenure at the company.

Age. Participants ranged in age ranged from 22 to 52. At individual sites, the average age ranged from 30 to 44.

Ethnicity. As shown in Figure 1, a majority (60%) of enrollees were white. This figure included Americans as well as European refugees whose native language was not English. Asians were the largest minority (33%). African, Hispanic, Afro-American, Native American, and others constituted the remaining 7%. These figures are especially noteworthy given the predominantly white population (98.4%) of the State of Maine

Tenure at Company. For enrollees, tenure at each workplace ranged from one to twenty years. As shown in Figure 2, the average tenure for participants in three companies was eight years or more. In one larger company, the average tenure for participants was less than two years.

Figure 1.

Ethnic Makeup of Project Population

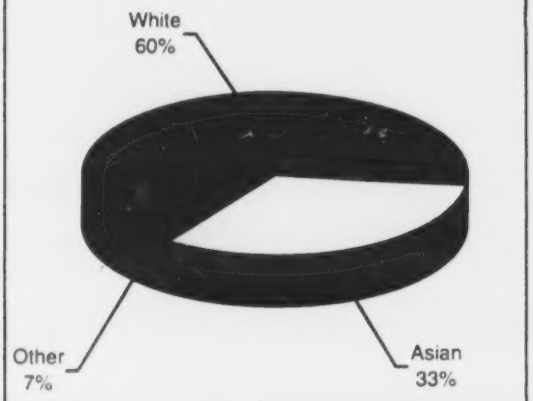
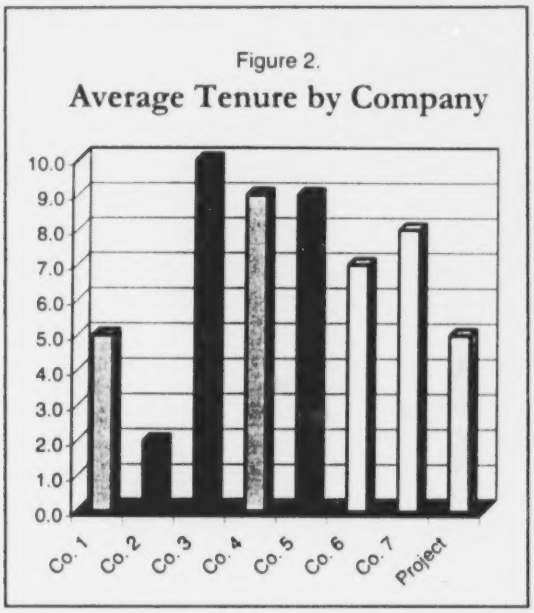


Figure 2.

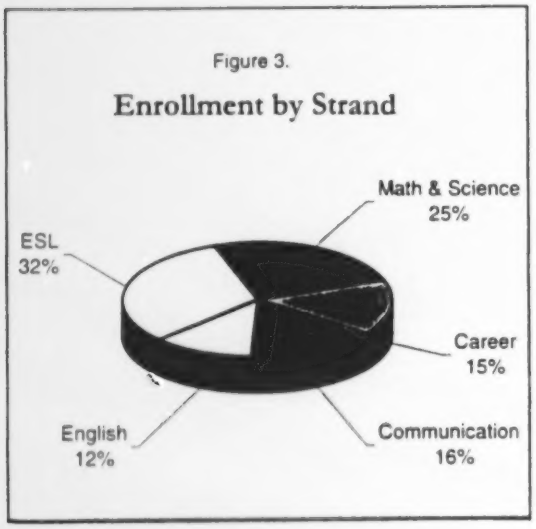
Average Tenure by Company



2. Curriculum Choices.

Four curriculum strands provided an initial framework for course offerings: literacy, English as a Second Language (ESL), math, and communication. As shown in Figure 3, ESL and math/science courses accounted for more than half of all enrollments.

An intensive needs assessment at each site determined the numbers and types of courses offered. Prior to each new cycle, advisory committees revised courses to meet worker needs and company priorities. Course offerings reflected features of the labor pool within each company and produced different patterns across sites.



Largest, Most Diverse Participant Cohort-- Largest ESL Offerings. One company with 740 employees had long-standing ties with Portland's Refugee Resettlement Center. Workers from twenty-five countries (Asia, Africa, and Europe) spoke thirty-seven languages. More than 360 employees enrolled in 97 courses.

Approximately 50% of these courses were ESL classes (Levels 1-5) and 25% were math/science courses. The remaining 25% included courses in communication, computer-assisted instruction, and cross-cultural communication.

Smallest, Most Homogeneous Participant Cohort--Diverse Curriculum Offerings. In a smaller company, courses were designed primarily for 65 production facility employees. Thirty-five employees, predominantly white males, enrolled in 14 courses in math, oral communications, GED preparation, science, computer technology and supervision.

Table 2.
Patterns of Enrollment in Seven Businesses

Company; # Cycles of Instruction	Employees	Persons Enrolled; % of Employees	
# 1- 8 cycles	189	110	58%
# 2 - 8 cycles	740	368	50%
# 3- 8 cycles	400	124	30%
# 4- 4 cycles	200	25	13%
# 5 - 5 cycles	1000 [product'n]	127	13%
# 6 - 8 cycles	411	137	33%
# 7- 8 cycles	65 [product'n]	35	54%
Totals		926	36%

Table 3.
Course Completions in Seven Businesses

Total Enrollments	2062	
Withdrawals	249	12%
Recommendation for Continued Study	35	2%
Successful Completions	1773	86%

3. Course Enrollments and Completions.

Organizing classes for learners in diverse work sites posed challenges for employers and providers as well as for participants.

Fluid work shifts produced different patterns for hours in the workday and days in the workweek. One site used a "wave" pattern--shifts beginning at one-hour intervals from 3 P.M. until midnight. Both enrollment and completion rates at this site were the lowest in the project.

One company scheduled classes completely within work shifts. To meet production needs and to invite employees to share a commitment, others designed some arrangement of company time and worker time for classes. In these cases, classes were typically scheduled at the change of shifts. Such scheduling presented a narrow "window of opportunity" for deploying instructors. Some participants noted difficulties in class concentration before or after a demanding workday.

Course Enrollments. Variations in company reports and changes over time make it difficult to report accurately the percentage of the workforce participating in classes. In addition, because of space limitations, one company (#5) capped enrollments. The 36% average shown in Figure 2, is simply a" ballpark estimate."

Course Completions. Because many individuals enrolled more than once, 2062 enrollees were served. As shown in Table 3, 12% withdrew--usually citing personal or work-related reasons. Instructors suggested continued course work for 2% and reported successful course completion for 86%.

II. Classroom Experiences

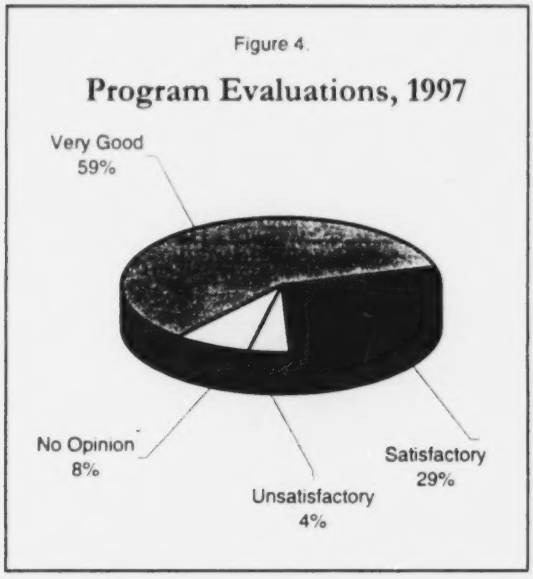
In today's high-performance companies, customer satisfaction ranks as a major measure of quality of service and business success. After the first cycle of instruction, participants in five operational sites wrote rave reviews. These broad indicators of satisfaction offered reassurance that the project was "on target." After the last instructional cycle, participants again gave strong approval to the program design.

1. Convenience of Program Arrangements

At the end of the first cycle of instruction, 192 respondents (84% of all enrollees), completed forms for program feedback.

More than 90% of all respondents reported no problem or minor problems related to the convenience of class schedules; absences or work-related interruptions; transportation or childcare.

Figure 4.



2. Effectiveness of Advisory Committee Functions.

After the last instructional cycle, a revised form, distributed to participants in six sites, reviewed the work of site advisory committees. Fourteen questions asked for ratings on committee performance in areas such as availability of information about courses, procedures for signing-up, course schedules and locations, and confidentiality. As shown in Figure 4, a strong majority rated program arrangements as very good or satisfactory.

Responses confirmed that the program design met participant needs and priorities of participants.

Participants comment on instructors:

Learner-Focused

Gave me more chances to have to express my own views at my own ability.

Gave great feedback and assistance to all who needed or wanted it. Very professional and friendly.

I found it helpful because I needed more background in order to understand trig better, otherwise I would have had to drop out.

Worked one-on-one when I wasn't sure how to solve a problem or do a certain task.

Knowledgeable and Prepared

She had a good plan layout for each class and presented it well.

He...makes class and learning a lot of fun and shows many different ways to solve a math problem.

Patient and Motivating

Very patient and help in my better understanding myself.

Goes slowly so we don't get confused, explains everything, very patient.

Well-balanced between listening, teaching, directing new ideas and concepts. Made sure all understood in a comfortable setting.

Inside the Classroom, p. 28

III. Instructor Performance

During the life of the project, a total of 50 instructors (36 women and 14 men) offered 327 classes for workplace participants. Two faculty members and two staff members, as well as the eight coordinators, also taught courses.

1. Learner-Focused Instruction

For the first instructional cycle, the four sites in operation offered twenty-one courses in communication, ESL, literacy, and math.

At the end of the cycle, participants were asked, in an open-ended format, to comment on the instructors. Across all sites and courses, 73% (165) of 225 participants completed this item.

A stunning 100% of respondents made positive comments. Most wrote simply *good, very good, or excellent.*

Approximately 30 made extended comments that conveyed the tenor of the classroom atmosphere and participant experiences. The comments here illustrate frequently repeated themes: instructors were learner-focused, knowledgeable and prepared, patient, and motivating.

Because instructors gave personal attention to individual learners, the classroom climate encouraged learners to ask for needed help. Several participants referred to the professionalism of instructors: *kept the class focused and positive.* Some comments simply offered accolades: *Awesome. Give her a raise,* or *Best instructor I've had, bar none.*

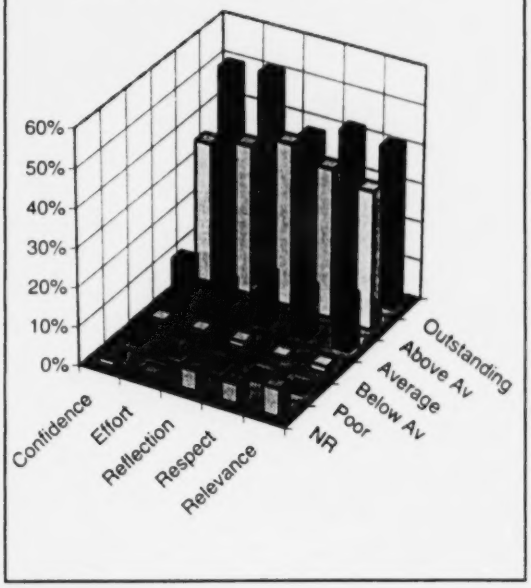
2. Modeling Behaviors of Adult Learners

The revised instruments for feedback on instruction drew a parallel between teacher and learner competencies. Participants were asked to rate instructors in five areas.

Confidence. To be a successful learner it is important to feel confident that you can learn. How well did the instructor a) help you to feel confident in your ability to learn?; b) encourage you to try new things? c) help you express/ engage your feelings?

Figure 5.

Course Evaluations, 1997



Effort. To learn new things requires patient and persistent effort. a) How well prepared was the teacher? b) How enthusiastic about the course? c) How well did the teacher give class time to practice new skills?

Reflection. Successful learners take the time to review progress--celebrating accomplishments, setting new goals. How well did the teacher a) provide time for you to review your progress? b) recognize your achievements? c) help you set new goals?

Respect for Differences. Different people learn in many different ways. a) How open was the teacher to comments, suggestions, and questions from the class? b) How do you rate the class as a place where people were free to express their ideas?

Relevance. How well did the teacher use examples from the workplace? Help you find ways to apply your learning on the job?

As shown in Figure 5, across all sites and curriculum areas, a strong majority of participants rated instructor performance as above average or outstanding.

An instructor comments on flexibility:

One of my most valuable learnings from my experience as a CBP teacher has been flexibility. I have learned to deal with whatever circumstances arise in the classroom. At [company A] I had to find a new classroom when the room was being expectedly painted. At [company B] I taught through a power outage. At [company C] I brought paperwork to class members when they couldn't leave the floor because of coverage problems. I learned to carry all my supplies--markers, papers, pens, pencils, scissors, staples--because I never knew what I would find, depending on the company.

I have also learned to be flexible in my curriculum design. At [company D] I went in planning to teach a verbal curriculum course, but found the students really wanted written communication, so we did that instead. Before I taught for the CBP I thought everything should be planned, and the plan should be followed strictly. But learnings turn up in the most unexpected places, often outside the formal plan. Now, I still plan, but I keep my eyes and ears constantly attuned to the possibilities for learning that exist outside the plan. I am always ready to adjust and go in a new direction. I don't worry about the unexpected, because I know I can deal with it.

1997 Spring Survey

3. Dedicated, Flexible Professionalism

From the first to the last cycle of instruction, in written comments or through rating scales, participants consistently applauded instructors of all courses.

By most criteria, the instructional team could be described as non-traditional. Most were mid-career men and women, some with prior careers in education, others with business or military backgrounds. Their artistic, craft, and hobby interests varied widely. More than half were graduates of or currently enrolled in USM's graduate program in adult education.

Typically instructors worked in teams with both lead teachers of curriculum strands and coordinators at each site. Many engaged in curriculum development or research projects pertinent to their specific interests.

Perhaps the most non-traditional characteristic of instructors was their willingness to teach at odd hours, in disparate locations, for four hours a week in instructional cycles of two or three months, with no predictability of a need for services from cycle to cycle.

Given such constraints, the stability of the instructional pool was outstanding. More than two-thirds of the group taught two or more courses; more than a quarter of the group taught eight or more courses. Six instructors taught between fourteen and twenty-six classes. This staying power of the instructional team gave evidence of their flexibility.

Instructors comment on what they learned:

I've improved upon reviewing and building upon past lessons....I now regularly review past information and skills and incorporate them into the current lesson plan. I have seen student comprehension and abilities improve with this approach.

I have learned to convey trust, to more effectively facilitate input response from students' personal experience knowledge, in an obvious manner through patience, encouragement, and leading questions...It encourages students to have confidence in their ability to learn....

The most significant thing I have observed is a better ability to "pace" my teaching, speaking more slowly, allowing wait time for student response--involving them directly in activities.

I have learned the importance of ongoing recording of one's learning as illustrated in the portfolio process. The desire to have an active record is an indication of a continuous commitment to learning that is self-initiated.

1997 Spring Survey

The contributions of instructors did not go unnoticed by managers. During interviews, three managers at different sites spontaneously introduced the topic of instructors. One observed: *Instructors are exceptional--in patience and listening...By listening they help students through more than just classroom learning. They are typically available after hours.* Another commented: *Teachers are very committed. They come to us if they have issues. They communicate vision, mission, values.*

Instructors readily describe themselves as learners. In the 1997 Spring Survey, 15 current instructors rated improvements due to their role as instructor. The top five improvements reported were:

1. Confidence
2. Communication (one-on-one)
3. Ongoing learning
4. Flexibility
5. Critical Thinking.

The integration of these learnings is summed up in the comment: [*Now*] *I don't worry about the unexpected because I know I can deal with it.* Sensitive to context, instructors responded to a range of cues. This orientation may explain the consistent positive responses of participants at the end of a course. Listening and responding to participants, instructors made "real time" adjustments to deal with problems as they arose--a teacher's versions of statistical process control.

Participants comment on course materials:

Quantity, Quality, Accessibility

Helpful and useful--Good variety.

Very informative. Easy to understand.

Well-suited to the needs of the class and were a catalyst to make the lessons enjoyable and stimulating.

Were very good, they used lots of examples - and allowed us to participate.

I like to read the book, help me learn more speaking

Wouldn't change a thing.

Everything we needed we had.

Relevance and Future Use

Very helpful--plenty of it will be used to enhance learning after classes are completed.

The materials handed out were beneficial to my personal needs as well as the job needs I had. They'll always be a reference for me, in time of need.

1995 Feedback on Instruction

IV. Curriculum Materials

Both project staff and instructors described the process of curriculum development as evolutionary--work-in-progress.

1. Appropriate and Relevant Class Materials

After the first instructional cycle, 154 participants commented on course materials. Across all sites and courses, 84% (129) wrote *OK, good,* or *excellent*.

More than thirty respondents added details describing quantity, quality, accessibility, relevance, and usefulness for the future. Problem areas identified by 14% (24) respondents pointed to 1) desire for more access to computers; 2) frustrations with one specific math text; and 3) personal learning preferences (e.g., *effective, but not to the extent I preferred. Paperwork was used instead of books. Easy to misplace).*

In 1997, two questions asked about work-related curriculum: Knowledge and skills that help you in the workplace are a part of these classes. How well did the teacher a) use examples for the workplace in class activities? b) help you find ways to apply your learning on the job?

Responding to a) workplace examples, 80% (245) checked *outstanding or above average.* Responding to b) application of learning, 77% (229) checked *outstanding or above average.* For both items, fewer than 2% checked *below average* or *poor.* A strong majority judged course materials relevant to the workplace.

An instructor comments on participant involvement in curriculum development:

In an ESL class, we discussed how to sequence steps for the use of a machine and necessary safety procedures to follow for various jobs the students performed.

In a following class we went to the various seats where students worked and the worker talked about the steps and the safety procedures. We asked questions for explanation and clarification, and students demonstrated steps and procedures while explaining. Forming questions and answers they used specific workplace vocabulary and demonstrated their ability to give factual information. They clarified responses sometimes by rewording or asking me how to use some words together.

When we returned to the classroom the students wrote brief descriptions of a procedure and safety operations.

The response was very positive from the class. It was their request to follow-up the initial lesson with a trip to their specific job site.

1997 Spring Survey

2. Context-Sensitive Curriculum.

Project office staff provided both leadership and support for coordinators, lead teachers, and instructional staff. From their vantage point, they saw progress toward learner-driven, site-specific, technology-based, and integrated curriculum offerings.

Learner-Driven Curriculum. This hallmark of CBP constituted the bond that united instructors in common efforts. Instructors understood this commitment: *One priority that CBP has always stressed is the importance of having learners' needs and desires drive the curriculum.* They also recognized the absence of existing roadmaps: *As you can see, I'm still in the process of learning how to understand how to do learner-driven teaching as well as I can."* Instructors tell many stories of ways in which participants shaped their courses.

Site-Specific Curriculum. Teacher innovations in curriculum were site-driven--responsive to distinctive work patterns and cultural features. A key benefit of the stability of the instructional staff was extended exposure to an organization and its distinctive features. Continued interactions with students and ongoing exposure to the work environment helped to build a knowledge base about the company. With this information, instructors continually sharpened work-related course objectives, materials, and activities.

The task of orienting instructors to each company emerged as an important feature of partnership cooperation and as an additional arena for shared responsibility. It requires further clarification of the roles and responsibilities of each partner.

CBP Curriculum Guides

Bouchard, Don. *Cross-Cultural Communications: Valuing Differences in the Workplace.*

CBP Math Group. *Math Guide.*

Cumisky, James, *Science in the Workplace.*

DeMillo, Jane. *Curriculum Guide for Computer Writing.*

Hannigan, Sheila. *Presenting Yourself: Communication Curriculum.*

Hewey, Bartlett. *Computer Students' Application of Learning.*

_____. *Writing Curriculum.*

LeCompte, Andrew. *Empathic Communication.*

McCain, Diana. *Team-building Curriculum.*

McGonagle, Sally C. *Science Curriculum.*

Technology-Based Curriculum. In all companies, the introduction of new, rapidly changing technologies generated intense pressures from participants for skill development in this area. Instructors made efforts to incorporate technology into every feasible aspect of curriculum.

Integrated Curriculum Offerings. With their diverse backgrounds, instructors were multi-talented, willing to try new things, ready to take risks. Course offerings at the end of the project differed notably from initial courses. Traditional reading and writing courses, for example, evolved to innovative courses in computer writing. Communication courses used videotapes to incorporate skills in pronunciation and presentation or focused new attention on writing and problem-solving skills. ESL courses merged with other courses to become ESL math or ESL science.

3. Multiple Products for Dissemination

The instructional staff produced a variety of curriculum guides, research reports, and a participant magazine.

Curriculum Guides. Information on CBP work in curriculum development is presented in ten guides for work-related curriculum. The guide for computer writing, for example, presents products generated by students to improve routine tasks: e.g., simplified operating instructions for a machine; redesign of labels and procedural layouts; reformatting of production codes to speed up daily calculations of runs; a format for written rather than only verbal communication between job functions.

CBP Project Papers

Cross-site Project

Summer Site Visits, '95: Workplace Education establishes innovative networking between Casco Bay Partners.

Narrative as a Tool for Critical Reflection

Dikeman, Nancy J. *Authentic Text: The Published Personal Narratives of Adult ESL Learners.*

_____. *Research Question: How Are Adult ESL Learners Affected by Having Their Personal Stories Published (in Writers at Work).*

Evans, Linda J., Bo Hewey, and Chessell McGee. *Stories Make the Link for Writers at Work.*

Evans, Linda J. *Celebrating Authorship with Writers at Work.*

Lyons, Nona and Linda Evans. *Portfolio: A Tool for Self-directed Learning at Work.* A Paper presented at the Symposium on Self-directed Learning: Past and Future, Montreal, September, 1997.

Cross-Site Visits. In 1995 the seasonal workload precluded regular class sessions at one site. As an alternate learning experience, the coordinator designed a small group activity for cross-site interaction. Teams from three sites participated in the exchange program. Members of each team played host to the other two, guiding a tour of the facility, presenting an overview of the operation, and distinctive features. The report, *Summer Site Visits, '95,* discusses objectives such as the exercise of new skills in a broader context of work and community and comparison of business practices in areas such as safety or quality. This project was repeated in the summer of 1996.

Research Study: The Portfolio Process
A university faculty member--with a national reputation in the use of portfolios by prospective teachers--collaborated with a team of fifteen instructors from the seven sites in a pilot study of worker portfolios.

The construction of individual portfolios is essentially a process that includes defining goals and objectives, gathering evidence, presenting reflections on learnings to others, and planning future directions. Although portfolios have a long history among professionals such as artists or architects and a more recent history in education, portfolios for workers is an innovation. The report on the pilot study presented three case studies and examined their implications for the use of portfolios in workplace education.

The first case describes activities at a site where the coordinator invited course participants to present their work at a graduation ceremony. Without any formal introduction to a portfolio process, forty

Instructors comment on how they use what they have learned as instructors:

The most specific concrete example is my work with portfolio development with learners. Each time I may try something a bit different and learn from the experience. I know I will carry this learning into my personal life and in future teaching situations.

I want to incorporate different aspects of the portfolio approach I learned in CBP workshops into [future teaching].

I have learned the importance of ongoing recording of one's learning as illustrated in the portfolio process. This desire to keep an active record is an indication of continuous commitment to learning that is self-initiated. I have tried to incorporate this discussion throughout the curriculum and to plan activities that lend themselves to a meaningful portfolio entry.

A faculty member experienced in curriculum development and developmental psychology comments on the portfolio process:

It does something nothing else does.

participants attended. Many stepped forward--reading their written pieces, reporting on problems solved in the workplace, and even demonstrating a science experiment completed in class. Through this spontaneous enthusiasm for telling their stories, participants across different curriculum strands demonstrated confidence, initiative, and oral presentation skills as well as an ability to reflect and report on their learnings.

More than half of the instructors participating in the portfolio project taught ESL students. The second case study described the work of one instructor who coached ESL participants in a writing class to document their learning. Participants from diverse countries, struggling with English, assembled memoirs of deep tragedy as well as descriptions of current successes (rewarding family experiences, letters of thanks to supervisors or managers). As they drew on personal experiences to improve their command of English, they also progressed gradually to understand and chart their progress: *"Sometimes we don't believe what we have achieved. But the portfolio helps us to remember."* These portfolios served as personal tools, especially useful for ESL students, to demonstrate and track personal and interpersonal growth as well as language skill development.

The final case study focused on implications for instructors and raised issues common across the three cases. A portfolio process is not simply a curriculum add-on. The use of portfolios requires instructors to rethink their courses, to find ways to build in the skills necessary for constructing portfolios. This is a new approach and teachers may need assistance in

The authors of the paper on portfolios comment on future horizons:

CBP instructors revised what they saw as key goals for the project and the courses they were teaching--helping students become reflective learners, bringing to consciousness student knowledge, and determining new learning goals.

While keeping these in mind, the faculty suggested a new, larger agenda, setting a greater challenge for themselves: how to integrate all of a student's work and learning, not simply a single course but learning over stretches of time, connecting it always to new goals and lifelong learning.

This suggestion could have profound implications and only time will tell what it means. But the having of such an idea is a significant achievement of the portfolio process.

reconceptualizing the curriculum. In addition, the severe time constraints for workplace education courses--with full agendas for each course--limit the time available for such an innovation. Efforts to introduce portfolios into the workplace will need to address such constraints.

During the portfolio project, one instructor videotaped five ESL students presenting their materials and reflecting on their learning. The tape gave evidence of the value of the process to individual learners--of its effectiveness as a tool for personal development, of its usefulness to encouraging reflection on learning. Potentially, portfolios can also be used for individual and group assessment, but no rubrics are yet available for this function. The CBP portfolio project, therefore, pointed to an avenue for further development.

The instructors in the portfolio project all constructed their own portfolios and, in half-hour presentations, explained their entries to the group. They were all learners. In the Spring 1997 Survey, twenty-two teachers reported on their efforts to use what they learned as instructors. The only curriculum development initiative that instructors specifically mentioned was the portfolio pilot study.

The project director comments on *Writers at Work:*

The straightforward, honest tone of Writers at Work has made it the single most popular product of the Casco Bay Partnership for Workplace Education. Copies of this unpretentious volume continue to surface in corporate offices, on the bookshelves of university administrators, and upon the coffee tables of working folks, educators, and politicians alike....

The ability to express one's views, to engage others in meaningful dialogue, and to gain a deeper insight into who we are and the work that we do remains the essence of workplace literacy.

Writers at Work. The six issues of *Writers at Work* provided a vehicle for 150 participants from all sites to publish their writing. The attractive volumes included brief biographies and pictures of each author, sometimes at work, sometimes with family members.

The concept for the publication has strong research backing. Literacy experts emphasize the critical importance of establishing an authentic personal voice and using writing to make meaning. The appearance of this writing in a polished publication gives added impetus to the process of language mastery and development of personal autonomy.

From its initial issue, *Writers at Work* attracted hundreds of submissions from each site, from ESL and non-ESL participants alike. Manuscripts included personal memoirs, essays, and poetry. Members of the faculty and administration, as well as local adult educators wrote forwards for each issue. The publication also generated several studies of the use of narrative as a tool for building confidence, sharpening critical thinking, and improving reading and writing skills.

Summary: A Dynamic Learning Environment.

Across all sites and courses, participants registered strong approval of program structure, instruction, and curriculum. Project documents provide evidence of staff productivity, creativity, and energetic pursuit of new learning.

PART THREE

BEYOND THE CLASSROOM

I. Self-Directed and Integrated Learning

As a result of classroom experiences, participants demonstrated:

1. new knowledge and skills in standard curriculum areas;
2. new personal and interpersonal skills across curriculum areas;
3. action learning: using new skills in the workplace.

II. Workplace Outcomes

In six partnership businesses, participants and managers reported improvements in:

1. routine operations and the work climate;
2. system changes that varied according to the nature of the business;
3. momentum for ongoing learning.

PART THREE

BEYOND THE CLASSROOM

An instructional program committed to both holistic and work-related learning moves between two worlds: the inner world of the person and the outer world of other people and of work.

Learners in the workplace who take charge of their own learning begin to integrate these worlds. In the process, they strengthen their sense of self-- their identity. Often they journey to the past and to the future to explore the meaning of new knowledge and skills--recognizing their potential for growth and development. In the context of the workplace, they test out new knowledge and skills and discover consequences-- for home, career, or social life as well as for the workplace.

A participant reflects on learning:

Yes, really my communication is better with people, because I learned more English, some computer, and how to work with different kinds and nationalities of people who speak with an accent. I'm taking the computer courses to help me learn something about becoming a medical secretary--and if possible to work in a hospital, which is what I'd really like to do because I studied to become a teacher and I like working with people.

1997 Spring Survey
(translated from Spanish)

An ESL participant used her native language to explain this integration. She identified three new skills: improvement in English, technical computer skills, and handling cross-cultural differences at work. In sketching future plans, she reported adapting to changed circumstances. She based long-term career objectives on a personal inventory. As an adult learner improving her work skills, she showed inner resources and a willingness to assume responsibility for her own learning and to actively shape her future.

The first section of Part Three presents evidence of holistic learning--how individuals personalized, integrated, and used new knowledge and skills. The second section explores the outcomes of this new learning in workplaces.

1997 Spring Survey:
Nine Competency Indicators

Self-management Skills
1. Confidence (trust myself; take initiative)

2. Effort (set goals, work to achieve them)

3. Flexibility(show patience, handle stress and setbacks, adapt)

4. Critical thinking (size up situations, assess options, plan ahead)

5. Ongoing learning (assess myself, learn from experience, apply learning)

Interpersonal Skills

6. Communication (listen, speak, write carefully to get and give information)

7. Teamwork (work with others to solve problems or carry out tasks)

Task-related Skills

8. Technical knowledge and skills (handle equipment, procedures, etc.)

9. Organizational skills (know company and use resources)

Additional Data Sources

Part Three continues to draw on two main sources of data: the project database and participant feedback from 1995 and 1997.

For this section, additional data sources include a 1997 Spring Survey; interviews with seven managers in five sites; a coordinator review session; and an interview with office staff.

The survey instrument was designed to build on project experience in developing a competency model for a specific job. Activities included reviewing the literature in the field, analyzing transcripts of behavioral event interviews, and organizing indicators as a model. The survey aimed to simplify concepts and to outline a general and useable model.

1997 Spring Survey, Part One: Individual Priorities and Application of Learning
Part One, with nine indicators of worker competencies, posed two questions: *How important to you?* and *Improvements due to courses?* Each question and item had a rating scale: 0 (none) to 3 (very much)

To address the issue of variations in personal priorities, the two ratings were multiplied to yield a "value-added" score for each item. These scores were tallied, averaged, and rank-ordered--by site and by respondent group..

The next section posed the question: *Have you tried to use what you learned in the classroom?* After a *Yes* or *No* check, respondents were asked to explain their answer. A content analysis of written responses identified key themes.

1997 Spring Survey: Thirteen Indicators of Workplace Outcomes

Work Factors
1. Technical Skills
2. Efficiency (accuracy, safety, etc)
3. Problem solving continuous improvement
4. Retention of employees
5. Absenteeism lateness

Interpersonal Factors
6. Communication (one-to-one)
7. Teamwork
8. Morale and company loyalty

Personal Factors
9. People who are confident self-reliant
10. People who are flexible
11. People who keep learning
12. People familiar with company mission, priorities, resources, etc.

1997 Spring Survey: Populations

1. Course Participants--*taking two or more courses.(Random sample in five larger sites; total population in sixth site).*
Responses: 32; 52% rate of return

2. Current Advisory Committee Members *in five larger sites (sixth site overlapped with participant sample)*
Responses: 23; 43% rate of return

3.Current Instructors
Responses: 15; 47% rate of return

4. Current Coordinators
Responses: 6; 100% rate of return

1997 Spring Survey, Part Two: Workplace Outcomes.
A list of 13 indicators of workplace outcomes included the nine original indicators and four additional items drawn from research on organizational impact: retention of employees; absenteeism/ lateness; advancement/promotion; and morale and company loyalty.

The form posed two questions: *Important in your company?* and *Improvements due to workplace education?* To address the issue of variations across sites, the two rating scales (0 - 3) were processed to yield a "value-added" score.

After a *Yes* or *No* check for the question: *Have you seen improvements in the workplace due to workplace education classes?*, respondents were asked to explain their answer. A content analysis identified key types of workplace outcomes.

Finally, participants were asked to report on activities initiated since 1995 inside and outside the workplace.

Populations. Part One was adapted for different populations. Advisory committee members, instructors, and coordinators were asked what improvements were due to their specific roles.

1997 Manager Interviews
Executives with "sign-off" power in all companies were contacted. Seven managers in five companies scheduled interviews. They reviewed and commented on the 13 indicators of workplace outcomes and on the operating guidelines for the project. They also offered general comments on the project.

Math Course Self-Assessment: Example of "I Can..." Form

I Can...	*Yes*	*Some-times*	*No*	*Com-ments*
Add/subtract whole #s				
Multiply whole numbers				
Divide whole numbers				
Multiply and divide fractions				
Use all the basic function keys on a calculator				
Estimate number of cartons on a pallet				
Convert between common fractions, decimals, and percents				
Drawn pie charts using fractions, decimals, and percents				
Feel confident about my math abilities				

My learning goals for this course are:

I. Workplace Learning

A commitment to self-directed learning generates customized instruction-- tailoring course objectives to the needs and priorities of learners. Customized instruction inevitably requires customized instruments to track progress. In some curriculum areas, at some levels, standardized measures were available and applicable to the learner. In other areas, they were not--and alternate measures were devised to track progress.

1. New Knowledge and Skills in Standard Curriculum Areas

Measures of learning in courses typically reported on incremental gains in specific knowledge and skills: e.g., mathematical operations, grammatically correct written or oral speech, reading accuracy and comprehension, etc. The accompanying sample self-assessment for math illustrates an "I Can..." form, the tool commonly used in various classes for pre- and post-measures of learning.

Full reports for each course are entered in the project database and included in the project director's final report. The 86% rate for course completions stands as evidence that each class produced specific learning outcomes for participants.

A restricted focus on narrow indicators of skills, however, fails to capture the rich dynamic of learning for each individual and it is severely limited as a source of new insights on adult learning. The project staff, therefore, mounted several initiatives to explore an alternate source of information on learning outcomes--adult learners themselves.

Self-Assessment of Classroom Performance: Selected Examples

1. Positive Assessments (87.5%)

Conscious Effort to Participate
Put forth best effort 100%

Tryed to learn everything, did homework, classwork, etc.

I made an effort to go to the board when asked for volunteers.

I think I was involved because I wanted to learn and asking and answering are learning.

Increased Confidence and Participation
I was made to feel comfortable in this class and as a result participated more than in previous courses I have taken.

Not a very good group participant as far as contributing my ideas. But I 've learned a few little tricks to give myself more confidence.

2. Problems with Performance (12.5%)
A little bashful. Most classes was able to verbally participate, but sometimes felt intimidated.

After class I talk to everyone too much because I learned English I have to practice.

1995 Program Feedback

2. New Personal and Interpersonal Skills across Curriculum Areas

Despite the challenging logistics of delivering cycles of instruction in rapid sequence to hundreds of participants in seven sites, project personnel consistently worked as "action-researchers"--identifying issues, seizing opportunities, and testing approaches for program improvements.

This dimension of project culture is concretely illustrated by efforts to better understand the experiences of adult learners and to test out ways to report this experience more accurately and fully. Major attention focused on substance--teasing out hidden clues about how adult learners integrated their instructional experiences. These early efforts were a search for richer, more complex descriptors of adult learnings.

Self-Assessment of Classroom Performance. In 1995, when participants (152) provided comments on their own participation, effort, or contribution in class, 87.5% (133) rated their performance positively. In research on work competencies, the kind of effort reported by many participants is frequently categorized as *achievement motivation.* Their comments also indicate that they recognize the importance of *self-confidence.* Both of these characteristics are considered indicators of superior performance.

The 12.5% (24) respondents who identified problems with their performance pointed to both personal styles and external circumstances. Both positive and negative comments indicate an ability to assess oneself objectively.

Table 4.
Personal and Interpersonal Skills:
1997 Self-Assessments

High = Outstanding; Above Average
Low = Below Average, Poor
NA = No Answer

n = 308

	High	Aver-age	Low	NA
Confidence (in ability to learn)	77% (238)	19% (60)	2% (5)	2% (5)
Respect (contribution to class comfort)	72% (221)	18% (55)	3% (10)	7% (22)
Effort (patience, persistence, practice)	68% (210)	31% (94)	1% (2)	1% (2)
Responsibility (take charge of own learning)	63% (194)	25% (76)	3% (8)	10% (30)
Reflection (on own progress)	61% (189)	29% (88)	3% (8)	7% (23)

[Percentages may not total 100% due to rounding.]

Self-Assessment of Personal and Interpersonal Skills. To expand the range of indicators of personal and interpersonal skills, the 1977 form for Feedback on Instruction incorporated a self-assessment of participant performance as adult learners.

The self-assessment questions were interwoven with questions assessing the performance of instructors, as reported on page 29. The questions asked participants to rate their own performance in five categories: confidence, effort, reflection, respect for differences, and responsibility.

In Table 4, the results of participant self-assessments are reordered in sequence from highest to lowest ratings. As volunteers for courses, all participants were self-selected and approximately two-thirds were not shy about rating their performance as outstanding or above average.

The variations in responses, however, are revealing. Confirming all prior reports, 96% registered *confidence* in their ability to learn. Equally high percentages reported making efforts to learn and showing respect for others by contributing to the comfort of the class. Some participants were more tentative in rating themselves on *responsibility*--taking charge of one's own learning. Thirty did not respond to this item, which, in many ways, is a touchstone of a process of growth and development.

Finally, fewer participants gave themselves high ratings for *reflection* on their progress. The discussion of the portfolio process on pages 35-36 suggests that a range of instructional strategies may be necessary to foster this skill and habit.

Job-Related Skill Improvement: Selected Examples

Technical Knowledge/Skills (math)
I am better able to set up and solve word math problems.

This course helped me improve my speed at the workplace.

I needed a refresher course...to go over general math basics. It will help me in my line of work.

Oral and Written Communication
It takes less time to think of what I want to say, but still say it clear enough for my co-workers to understand.

I feel I can write more effectively... my sentence structure and grammar has gotten much better.

After I tooked up this class I was confidence to pronounce word correctly, used the tenses of verbs, proper used of articles a, an, the.

Self-management Skills
Helped build my self-confidence.

To better deal with people around you...and most of all more patience.

It changed how I looked at my job.

Able to identify most of my skills...helped me try to bring out the best of them in the workplace.

1995 Feedback on Instruction

Self-Assessment of Job-Related Skill Improvements. In 1995 when participants were asked if the course just completed had improved job-related skills, 94% (174) of participants responded *Yes* and 100 wrote specific examples of these improvements.

In their responses, participants demonstrated an ability to select learnings that they judged important. In some cases they identified prior needs, tracked their progress, and looked to the future. In all classes, across all sites, they indicated a clear understanding that classroom work was related to job performance.

Frequently responses ranged beyond narrow curriculum objectives and included multiple skills; e.g., improved math skills built confidence; empathy and patience strengthened communication skills.

Across curriculum areas, respondents reported new activities that would improve their job performance and productivity. They also reported new insights about themselves (e.g., problem-solving skills) and about their job (e.g., organizational awareness).

Although these responses are descriptive only, they suggest the uniqueness, the complexity, and the interrelatedness of individual learning experiences. They point to a link between holistic learning and self-directed learning.

Reflecting on these responses, project staff drew a conclusion: *the ability to specify what has been learned and to plan future directions served as subtle but significant indicators of skill development.*

Improvements Due to Courses: Rank Order for Participant Sample

1. ***Confidence*** *(trust myself, take initiative)*

2. ***Ongoing Learning*** *(assess myself, learn from experience, apply learning)*

*2.** ***Communication*** *(listen, speak, write carefully to get and give information)*

4. ***Teamwork*** *(work with others to solve problems or carry out tasks)*

*4.** ***Effort*** *(set goals, work to achieve them)*

6. ***Critical Thinking*** *(size up situations, assess options, plan ahead)*

7. ***Flexibility*** *(show patience, handle stress and setbacks, adapt)*

8. ***Organizational Skills*** *(know company and use resources)*

9. ***Technical Knowledge and Skills*** *(handle equipment, procedures, etc.)*

** Designates tied scores.*

1997 Spring Survey

Self-Assessment of Improvements in Learning. A project committed to the individual learner faces continuing tensions between the richness, complexity, and uniqueness of individual learning experiences and the need to aggregate data on those learnings in reportable form.

To cross-check the indicators of generic skills reported in feedback forms, one component of the 1997 Spring Survey tested a non-traditional approach for collecting data from participants on personal and interpersonal learning outcomes.

As described on pages 39-40, nine categories of personal, interpersonal, and work skills were derived from prior analysis of various competency models and worker interviews. When two rating scales from 0 to 3 were multiplied, the highest possible score for each item was 9 and the lowest possible score 0. For the 32 respondents, the item for *Confidence* topped the rankings, receiving 76% of the highest possible score. The next six items clustered closely together (70% or more) and all items received more than 60% of the highest possible score.

This experimental methodology, designed only as a first step to expand categories for reporting, has not been statistically validated. The findings, however, represent participant judgments about what is important to them and where they see improvements in their performance. Results are consistent with prior participant feedback on classroom learning.

A participant describes a spiral of learning:

After completing a math course I was able to on several occasions help my stepson with his homework.

This was a major self-esteem builder which improved my relationship at home.

This confidence carried over into the workplace and helped me become more involved in problem resolution situations

Recently I volunteered [on a major project] that did not seem as intimidating as it would have prior to being involved in workplace education.

1997 Spring Survey

3. Action-Learning: Using New Skills

As learners integrated experiences, they linked their concrete daily actions with their personal inner world in a spiral of learning. The accompanying description of an initiative at work reveals a private world--family ties and inner experiences. Yet the story also reveals a bedrock reality of personal growth: all learning involves the whole person. The vignette details intricate connections: new mastery of math-->new confidence to use these skills at home-->-new bonds in relationships-->new confidence at home-->new confidence at work-->new and better performance at work--all foundations for a continued spiral of personal growth.

Drawing on key themes in earlier participant feedback, the project staff developed new instruments to consolidate data on the application of classroom learning.

Applying Learning on the Job. One question on the 1997 feedback on instruction asked participants: How well did you apply your learning on the job?

Of 292 respondents, 71% (201) checked *above average or outstanding;* 25% (80) checked *average;* and 4% (12) checked *below average* or *poor.*

Repeating 1995 findings, a substantial majority of participants strongly confirmed a link between classroom learning and job performance.

Using Classroom Learning. One *Yes* or *No* question in the 1997 Spring Survey asked a sample of participants: *Have to tried to use what you learned in the classroom?*

Of 28 respondents, 89% responded *Yes.* Three respondents answered *No* and only one provided an explanation: *Math not used on current job.*

In explaining *Yes* answers, respondents gave 45 specific examples. A content analysis of these examples revealed five commonly repeated topics:

Communications	38%
Technical Work Tasks	26%
Confidence	18%
Team Participation	17%
Experiences outside the workplace	19%

The word *confidence* was the single most frequently used word--often tied with basic skills in math, writing, or speaking.

Results are consistent across the life of the project. Participants not only saw the link between classes and work, they described a variety of ways in which they used what they learned. Reports from instructors and staff push this conclusion one step further: *class participants take initiatives to make new linkages between classroom instruction and the workplace. They are active participants in their own job-related education.*

Given this dynamic, a key question remains: Do participant efforts to apply their learning have any outcomes in the workplace?

Using Classroom Learning:
Selected Examples

I typed and printed suggestions for my work area.

I talked to a technician about helping people to do their job better--not criticise the person.

I did improve my accuracy and speed.

Really taught me how to listen better. It also gave me more self-confidence.

I can ask supervise something in my machine. I ask my friend some tools in company and at my work.

I've tried to communicate better with people I've had trouble with in the past . . . to better understand their point of view.

Just today I was fabricating a safety shield for one of the new machines we have at work and I had to figure out some angles and measurements. That math really helped me.

1997 Spring Survey

Improvements in Company Due to Workplace Education: Rank Order for 13 Indicators

Items 1 - 13 = Rank order of 30 Course Participants
Items in Parentheses = Rank order of 22 Advisory Committee Members

1. (1) *People who keep learning*
2. (3) *Communication (one-to-one)*
3. (2) *Problem solving and continuous improvement*
4. (5) *Teamwork*
5. (4) *Technical Skills (proper use of equipment, etc.)*
6. (7) *People who are confident and self-reliant*
7. (10) *People familiar with company mission*
8. (9) *Efficiency (accuracy, safety, etc.)*
9. (6) *People who are flexible*
10. (8) *Advancement promotion*
11. (13) *Morale and company loyalty*
12. (12) *Retention of employees*
13. (11) *Absenteeism lateness*

1997 Spring Survey

II. Workplace Outcomes

Both course participants and advisory committee members described improvements in routine operations and work climate. Managers confirmed these assessments and identified other system improvements. Across all sites, there was evidence of momentum for ongoing learning.

1. Improvements in Routine Operations and Work Climate.

In the 1997 Spring Survey, course participants and advisory committee members rated 13 workplace indicators.

Both groups gave highest ratings to the same five items: ongoing learning, communication, problem solving, teamwork, and technical skills.

The rating for ongoing learning, 78% of the highest possible score, put it in a strong first place. Coordinators also gave ongoing learning top ranking. Instructors placed it second--to communications.

Respondents gave similar very low ratings to the same final three indicators: morale and company loyalty; retention of employees; and absenteeism/ lateness. Coordinators, instructors, and manager interviews corroborated this assessment. Three managers specifically rejected them as *second order* or *effects of the others.*

Across sites and roles, survey respondents consistently reported outcomes related to improvements in technical, interpersonal, and personal skills.

Improvements in the Workplace
Content Analysis of Examples

	Course Participants (n = 26)	Advisory Committee Members (n = 19)
Communications	55%	35%
Work Tasks	21%	24%
Confidence	18%	24%
Team Participation	7%	17%

1997 Spring Survey

Examples of Improvements in the Workplace. One *Yes* or *No* question in the 1997 Spring Survey asked: *Have you seen improvements in the workplace due to workplace education classes?*

Nearly all of the 32 course participants (93%) and the 23 advisory committee members (91%) responded *Yes*. Three of the four who responded *No* explained their responses: *1)[from the smallest site] Not enough to make a difference; 2) Hostile and negative environment; and 3) Not tied to promotion.*

The 44 course participants and advisory members who provided explanations for their *Yes* responses gave 74 specific examples of improvements in the workplace. They emphasized four major areas of improvement: communications, work tasks, confidence, and team participation.

The frequency of similar comments shows strong agreement between the two groups. For both groups, the word *confidence* was the single word repeated most frequently.

The specific examples on the following page illustrate various types of responses to this item. They offer concrete descriptions of the kinds of changes on the job that workers experience.

Improvements in the Workplace Due to Workplace Education: Selected Examples from Participants and Advisory Committee Members

I find less misunderstanding and better listening skills have developed.

Everyday aid to conflict issues.

[People taking classes] seem happier because they are growing personally.

Students are more involved in projects and day to day on the job decisions.

More people pulling together to help each other out--being recognized by peers for doing a good job.

There's more involvement in projects and sub-groups.

People have more confidence in themselves and it shows in their work.

Palpable self-confidence and demonstrated interest in "going the extra mile."

Have more respect for company rules like safety, etc.

Some crew leads seem to be able to talk to associates without yelling.

People I know who have taken classes have tryed harder to better their surroundings and the way they approach things that they deal with on a regular basis.

I've seen people who took communications courses that now are pleasant to work with whereas before they might not have been.

Math has changed the way that written or oral reports or estimates look like: more accurate, precise information....The desire to promote and the will to learn beyond the classrooms on the production floor is present: a lot of questions ("Why do we do this or that?"), suggestions, and initiatives from associates that were used to be told only what to do-- without explanations.

More enthusiasm towards learning. We also tied this program to promotional opportunities.

While learning writing, reading, math, etc., students were learning safety, communications, TQM, or diversity principles that the company had targeted as necessary and important.

Some people became familiar with Excel and then as a result use the spreadsheets to see how little things affect the outcome.

Computer classes helped many people overcome their fears. Some have acquired quite an interest and have actually purchased their own....Math classes have assisted them in their learning process of [quality check] systems. It also helps the teacher [of these systems] because she doesn't have to teach the basics first.

[At a difficult time] workplace education courses seem to offer ballast in these rough seas.

Management Perspectives on Workplace Outcomes. The seven managers interviewed in the summer of 1997 held major leadership positions: three were executives with the title of president or vice-president; four were managers of a facility or unit. The five businesses they managed planned to continue the workplace education program after the termination of the grant. (Personnel in two companies terminating the project did not respond to requests for interviews.)

The managers who were interviewed were not in direct or daily contact with project operations. Typically they relied on informal information channels and their own observations. Typically, too, they downplayed the importance of statistical analyses of data--on student achievement as well as on yields or labor variations. One manager noted: *Measurement is not worth the extra effort.* Another applied the principles of a Statistical Control Process: *It's important to get details in real time--(through informal conversations) rather than historic time--so you can make corrections.*

Drawing on their own individual data sources, managers consistently gave priority rating to five personal and interpersonal indicators:

Ongoing learning
Problem solving and continuous improvement
Communication
Teamwork.
Confidence

Despite variations across sites, managers agreed on these outcomes.

Comments on workplace improvements:

A general manager: *For ESL workers, math can be scary--but by word of mouth they get the courage to take it. Workers took advantage, phenomenally... communication improved....they got more involved.*

A president: *The program sets a foundation. We see people who have taken courses and we talk with them...We see that they set an example.*

A vice-president:

We have a lot of feedback from associates, from graduates, about what they've gained. We know there is 1) elevated morale, 2) more aspiration, 3) a valuing of education....They keep learning.

Interviews, Summer 1997

Comment on system outcomes:

Scrap Reduction

One indicator is scrap reduction....The essence of SPC (statistical process control) is to act before the problem develops--while the machine is still making good products. SPC requires reading the sheets, understanding math, having the confidence to ask "what should be done?"

Promotion/Advancement

If they get through the math class, they have added incentive [to join the "pay for skills" program] and earn more money; I see people who used to fail [tests], now succeeding.

We can see the impact in "pay for skills" as people apply and succeed.

Support for In-house Training

Very helpful as we move to different levels of ISO9000.

Workplace education enhances ability to understand training and find it useful. Basics allow them to better utilize the training--to see how it is applied to the job.

2. System Improvements. All seven managers agreed on the importance of personal and interpersonal skills--and these are the most difficult to report with statistics. Managers tended to discount objective or statistical measures for system outcomes. When they did identify system outcomes, the indicators used varied with specific features of their operations.

Technical skills and efficiency. Two managers assigned high priority to these indicators, but two other managers specifically rejected these indicators as *residual.* The difference may be a problem of definition-- what do these terms mean? Managers who relied on these indicators viewed them as contributing to productivity. For the two managers who dismissed these indicators, technical training was an in-house function to prepare workers for new equipment or problem-solving processes. For them, workplace education served as preparation such in-house training.

Managers also introduced three specific indicators of system outcomes that reflected differences in business operations: scrap reduction, promotion/ advancement, and support for in-house training.

Scrap Reduction. One manager pointed to scrap reduction data as a strong indicator of program outcomes; others did not mention it. Although it is almost impossible to isolate the effect of workplace education programs from other contributing factors, this indicator should be included in a future instrument.

Project staff comment on outcomes:

[TQM] facilitators have worked closely with teachers to modify and adjust their presentation of material for ESL associates. They have done a great job simplifying and it has improved the comprehension and participation of associates.

Training and HR have received such positive feedback from operations concerning the minimal constraints of workplace ed on production that training is now scheduling and structuring many of its programs at similar times and in similar ways.

As a final project a student decided to create a form that would facilitate communication between first and second shifts...At the end of a single class session, he had designed an innovation that the company could immediately implement. It is small moments of initiative like this that most companies celebrate and attempt to generate through programs like TQM.

Promotion/Advancement. Two managers in companies with pay-for-skills programs or similar processes for periodic job upgrades saw promotion/ advancement as one of the strongest indicators of project impact. For them, the project improved the quality of the applicant pool for promotion. It also contributed to successful outcomes for applicants--particularly those who had been unsuccessful in prior applications. Companies without such programs rejected this indicator.

Support for In-house Training. Managers of three companies specifically referred to the benefits of the project in preparing workers to understand and use company-sponsored training.

As the accompanying staff comments show, this support also took different forms in different companies. In one company, project staff assisted trainers or facilitators in adapting materials for ESL workers. Another company adopted the arrangements for scheduling courses. This same company also saw advantages in weekly cycles for instruction in contrast to sporadic one-or two-day training events.

Whatever indicators managers used, they were convinced that workplace education had contributed to improvements in their workplace. They were prepared to continue their support for the program.

An instructor comments on teamwork on the job:

CBP students get to know one another in class. They share personal stories and experiences. This opening up and connection then leads to new teamwork on the job. Students who before would never talk with each other, let alone help one another, now, because of sharing a common learning experience, are much more apt to help each other on the job.

III. Momentum for Ongoing Learning

When seven managers reviewed the original operating guidelines for the project, they confirmed support for them. They verified the original operating guidelines as a solid foundation for the program. Indirectly during interviews, managers also confirmed the role of workplace education as a support for the company philosophy and mission.

1. Support for Philosophy and Mission.

From their vantage point, all managers in the five continuing sites presented their judgments about the project in the context of their organizational philosophy and mission. They saw the fit with the project philosophy and mission as the basis for a productive relationship. They saw workplace education as one way to translate the rhetoric of mission into a practical reality.

In the web-like structure of project operations, one vital connection between sponsor and provider is the person or persons representing management on the advisory committee. In some companies, human resource personnel fill this role; in others, line managers. Almost all companies recognized the benefits of broad worker participation in this group (and one took steps to reduce the number of upper-echelon representatives). The management representative is, therefore, a minority member--with a very strong voice. Usually the project site coordinator and company liaison work together as guides and mentors for the group.

As a team leader, the company representative has an opportunity to develop

Two company liaisons on an advisory committees comment:

As training manager, my involvement with the advisory team has enabled me to know the sub-division and its people and their needs. I have learned a lot about what is important to the other members and those they represent.

Each semester the committee tried to focus the curriculum content of the classes on a topic or topics strategically important to the company. While learning reading, writing, math, or other skills, the students were learning safety, TQM, communication, or diversity principles that the company had targeted as necessary and important at that time. These and other "content" areas have helped carry these areas of focus forward to greater success.

1997 Spring Survey

the teamwork skills of members. Perhaps even more important, because of a formal management role, this person holds the key to expanding the project outcomes within the system. In some companies the process of integrating the project with workplace operations dovetails with human resource or training functions. In others, it dovetails with supervisory functions.

Although company representatives are represented in this review as members of advisory committees, their specific voices (like those of supervisors) are, regrettably, missing. They play a critical role in translating company and project mission into practice. The project staff recognized their contributions and applauded their insights, enthusiasm and commitment.

2. Varied Results across Sites.

Each business partner carries out its mission in a fast-paced world of changing technology, increased competition, and shifting markets. This dynamic environment calls for clear vision and calculated risk-taking. As mission statements show, each partner works with a double-vision--looking outward to gauge opportunities and challenges, looking inward to assess and assemble resources. Calibrating these two dimensions is a fluid, continuing process.

Workplace education introduced a new variable into each workplace. The unique character of each venture eludes narrow judgments of success or failure.

Five companies have chosen to continue the workplace education program and, as reported earlier, the initiative in one company was judged a failure. Although

managers of the sixth company decided not to continue the program, in a final review, all those involved in the program judged it a success. Committee members pointed to the positive benefits for workers--and one announced test scores and college enrollment. Management representatives reported a new understanding of worker perspectives and a recognition of problems in internal communications. Finally, the enthusiasm of participants had motivated employees of a subcontractor to push for a workplace education program. The subcontractor program will continue.

When it works well, workplace education defies simplistic assessments of success or failure. Each of the five continuing companies is an unfinished story with its own weaknesses and strengths. Some weaknesses are tangible and structural--the logistics of budget, schedule, recruitment, or information flow. Some strengths are intangible and cultural--an atmosphere of mutual respect and support.

From a company mission statement

...provides its members with education, challenge and opportunity for personal and professional growth while achieving annual financial plans and enhancing company value.

3. Worker Initiatives and a Spiral of Learning.

The perception that workplace education energizes learners is supported by responses in the 1997 Spring Survey where 23 (72%) participants described activities beyond the classroom since 1995:

63% reported workplace activities such as job bids, crew leads, team projects;

49% described job changes or upgrades;

20% reported study outside the workplace in adult or community education, citizenship classes, enrollment in or return to college.

40% reported self-directed study such as preparation for GED, computer instruction.

Although these percentages are merely suggestive, they point to a momentum for continued learning.

From a company lapel badge:

The Basic Principles

1. Focus on the work process, issues, or behavior, not the person.

2. Maintain the self-confidence and esteem of others.

3. Maintain strong partnership your internal and external customers and suppliers.

4. Take initiative to improve work processes and partnerships.

5. Lead by example.

At its best, workplace education creates its own spiral of learning in businesses. From their vantage point as participant-observers, project staff described a dynamic, interactive process. When workers are energized to take charge of their own learning, supervisors gain confidence in the workers' ability to handle their jobs and take care of themselves. When workers take advantage of the opportunity for education, managers recognize them as valued employees. Even subtle shifts in perception are not lost on employees who, in turn, respond to signals affirming their value. This encouragement reassures workers that they can face and survive the inevitable changes and transitions in today's workplace. It reassures companies that--in business terms--they are nurturing the human resources essential for success.

Summary: Learners at Work.

All reports from participants provide strong evidence of continued and integrated learning.--new confidence, effort, communication skills, technical skills. Participants described how they used these skills at their jobs and gave examples of outcomes in the workplace. Managers expected the program to promote such skills as a resource for ongoing learning. The compelling testimony of the learners demonstrates.that this expectation was met.

PART FOUR

BEYOND THE WORKPLACE

The spiral of learning for the Casco Bay Partnership for Workplace Education has implications for business and university partners, as well as for the field of workplace education.

I. Management of Workplace Instruction

Project achievements in managing an instructional program point to the need for continued work in three areas:

1. competency models for staff roles;
2. funding for administrative services;
3. refinement of information and reporting systems.

II. Instruction in the Workplace

Project achievements in workplace classrooms highlight three critical issues for education:

1. instructional resources for self-directed learning;
2. teamwork as a learning opportunity at every level;
3. reflective practice for ongoing learning.

III. Investment in Workplace Education

Efforts to assess the return on investments in workplace education invite consideration of two types of benefits:

1. tangible values in the workplace;
2. intangible values in and beyond the workplace

Casco Bay Partnership
for Workplace Education
Project Initiatives 1994-1997

Management of Workplace Instruction.

1. Management structure with defined roles for:
site coordinators,
lead teachers,
and office staff;

2. Collaborative structures and processes to promote shared decision making:
site advisory committees,
roles for university personnel;

2. Pilot tests for a comprehensive, interactive information system:
project database,
feedback loops for formative evaluation,
periodic site reports;

3. Extensive communication networks in the field.

PART FOUR

BEYOND THE WORKPLACE

As a three-year demonstration project, the Casco Bay Partnership for Workplace Education has its own spiral of learning. Project experiences raise issues of management and education that confront innovative partnerships between business and institutions of higher education. They also raise broader issues of the value of investments in workplace education.

I Management of Workplace Instruction

At the termination of the grant period, CBP, like its business partners, has a double-vision--to external opportunities and internal resources. Restructuring operations requires clarity of vision as well as calculated risk-taking. It also entails an assessment of strengths and challenges.

1. Competency Models for Staff Roles.

For adult educators focused on the individual learner, coordinating a diffuse instructional program requires a new management model. Building on prior experience, project staff redesigned staff roles and functions. Site coordinators managed instructional programs at each site; lead teachers coordinated curriculum development, and office staff provided leadership and support services.

In carrying out their new roles, staff members developed a range of new knowledge and skills. This experience provides a valuable resource for an initiative to develop task analyses and competency models for these managerial roles.

Margaret Wheatley comments on information as the creative energy of the universe:

In a constantly evolving, dynamic universe, information is the fundamental ingredient, the key source of structuration--the process of creating structure. Something we cannot see, touch, or get our hands around is out there, organizing life. Information is managing us.

For a system to remain alive, for the universe to move onward, information must be continually generated. If there is nothing new, or if the information that exists simply confirms what is, then the result will be death....The fuel of life is new information--novelty--ordered into new structures. We need to have information coursing through our systems, disturbing the peace, imbuing everything it touches with new life. We need, therefore, to develop new approaches to information--not management but encouragement, not control but genesis (p. 104).

Leadership and the New Science

2. Funding for Administrative Services

Office staff members mobilized resources--from the university and the broader arena of workplace education--to support staff in the field and coordinate efforts. They clarified direction, mentored coordinator and instructional staff, addressed emerging problems, and translated learnings across sites. This report substantially understates the range and quality of staff administrative services that, almost invisibly, made the program successful.

Contracts for the delivery of instructional services in the workplace typically discount the value of managerial coordination and limit budget allocations for it. Although high-performance businesses acknowledge the need for high-quality support services, sustaining these functions in the future will tax the resources and ingenuity of project staff.

3. Refinement of Information and Reporting Systems.

Managing information flow is an ongoing challenge for all managers in an age of data overload. New instruments for data collection and reporting have been field-tested by project staff and are ready for final revision and dissemination. This task merits special attention because these databases provide a system for integrating evaluation into routine operations.

Each managerial initiative presents an agenda of unfinished business. The challenge of continuing these developmental efforts is formidable.

Casco Bay Partnership for Workplace Education Project Initiatives 1994-1997

Educational Innovations

1. Instructional strategies for integrated learning;

2. Curriculum guides for job-related, site focused instruction;

3. New tools for self-directed learning--tracking skill development in classrooms;

4. Research on tools for self-directed learning: 1) the role of narrative (and the publication Writers at Work; 2) the portfolio process--case study, models, and videotape.

II. Instruction in the Workplace

One hallmark of the Casco Partnership operations is integrity--a determination to carry out operations in a way that models the project commitment to self-directed learning and shared decision making. Workplaces offer a real-world laboratory for understanding how these two commitments interrelate and reinforce each other to promote ongoing learning at all levels of operation.

1. Instructional Resources for Self-directed Learning

The focus on self-directed learning builds on traditional principles in the field of adult education. As neuroscientists use new technologies to provide clearer pictures of how the brain works, they underscore the importance of paying attention to the whole person--thoughts, feelings, prior history, and future hopes. They shed light on hidden inner resources that can empower people to act as agents of their own learning. Drawing out these resources is the most fundamental meaning and purpose of education.

In this sense, self-directed learning transcends the narrow category of basic education. As a process, it coaches people to deal with the complex arenas of self, other people, and the world around them. For each of these arenas, it provides practice in ways to see and assess, to plan and engage, to reflect and learn. Instruction that promotes self-directed learning offers a rich and sophisticated general education.

Project staff developed a range of strategies to foster self-directed learning in workplace classrooms. New instruments for

self-assessment served both instructors and learners. Research on worker portfolios proved the value of the portfolio process for critical reflection on classroom learning and for tracking personal progress. Both of these initiatives served ESL workers as well as English-speaking workers. Both are ready for further refinement and for dissemination. In addition, the explosion of new computer resources creates strong incentives to incorporate new technologies and informal activities as tools for self-directed learning.

2. Teamwork as a Learning Opportunity at Every Level.

The focus on shared decision making or teamwork places the learner in context. Even the most private learning activity takes place within a concrete physical and social environment. For each group member, cooperation with others can be both a testing ground and a source for new knowledge and skills.

Like many businesses committed to shared decision making, project staff wrestled with the issue of control--in classrooms as well as in advisory committee or staff meetings. The task of providing a structure for continued growth is at the heart of any educational venture. Efforts to model teamwork in a way that supports self-directed learning pose both theoretical and pragmatic questions: How much direction? How much leeway for self-direction? What are the tradeoffs in time and money vs. a sense of ownership and freedom for creativity? Businesses as well as workplace education projects grapple with these questions and they merit continued attention.

Peter M. Senge comments on dialogue and discussion:

Individual learning, at some level, is irrelevant for organizational learning. Individuals learn all the time, yet there is no organizational learning. But if teams learn, they become a microcosm for learning throughout the organization. Insights gained are put into action. Skills developed can propagate to other individuals and to other teams (p. 236).

The Fifth Discipline: The Art & Practice of the Learning Organization

Marvin R.Weisbord comments on shared decision making:

The quickest way to increase dignity, meaning, and community in a workplace is to involve people in redesigning their own work. That is also the shortest route --in the long run--to lower costs, higher quality, and more satisfied customers. ...The simplest way to get started is to have workers, technical experts and managers sit down together and look at how the whole system works. If they listen to each other and hang it long enough, they can create satisfying and effective workplaces beyond Taylor's most extravagant dreams (p. 312).

Productive Workplaces: Organizing and Managing for Dignity, Meaning, and Community.

3. Reflective Practice for Ongoing Learning

Business partnerships place an educational program in an unprotected environment--in a fast-paced, hands-on, (supposedly) no-nonsense world. The expectations, the norms, the language of business are not those of academia. Workplace education requires adapting to this world--and to differences in different sites--without comprising fundamental educational principles. There is never a final resolution of this tension.

Furthermore, as the project shifts to a new role as provider of instructional services, new contractual obligations, daily demands, and time pressures are likely to limit the time available for critical reflection. As professional educators they value an approach that grounds practice in solid theory. They have become adept at translating theory into practice--in real-world time, in real-world language. Too often, however, the urgency of the immediate and the need for "productivity" constrain their efforts to record and expand their spiral of learning.

Every one of these managerial and educational challenges has implications for the university partner and, in particular, for graduate programs in adult education. The insights, issues, and questions that surfaced during this project deserve careful scrutiny by faculty and administrators.

III. Investments in Workplace Education

Two groups of people search for ways to estimate the value of workplace education and justify investment in it. Champions or opponents within a workplace often try to estimate the effect of workplace education programs on the "bottom line." Economists or labor specialists explore ways to calculate return on investment.

1. Tangible Values in the Workplace.

The documentation presented here underscores the difficulty of assembling concrete measures of workplace outcomes. Managers who find the program worthwhile point to improvements in personal and interpersonal skills as well as in so-called basic skills. They see spinoff effects in more confidence and initiative, better communications, and higher morale. But no formulas are available to fix a price for self-esteem or rapport among workers. Companies may allocate budget lines for surveys about morale or estimate its value when a company is sold, but there is presently no way to ensure that dollars spent will buy specific levels of improvements in work climate.

Even without this assurance of payback, many companies demonstrate concern for the general well-being of employees by providing childcare or health facilities. They acknowledge intangible benefits that justify such investments. In a similar way, high-performance companies have traditionally offered tuition reimbursements to professionals as a supplement to company-sponsored training.

A manager comments on integrated learning and workplace morale:

Workplace education gives people an opportunity to better themselves--not only on the job but as a person. They can do a better job handling personal finances, reading a newspaper--and it does a lot for self-esteem. It's intangible. There's no way to measure in numbers or real terms, but the fact that they feel good about themselves means that they are happier employees and happier employees are better employees--more energetic, more positive.

Beyond the Workplace, p. 64

As new technologies demand a more sophisticated workforce, workplace education programs present an opportunity to extend this educational benefit throughout an organization. But education is a process of personal growth and development, not a production function. The managers in CBP partnerships used their own antennae and trusted their intuition to solidify their support. In some sites, they could point to concrete indicators of system impact, but these varied from site to site. One employment officer noted that, because of workplace education, the company was gaining a reputation as *an employer of choice.* Like the comment that workplace education classes offered *ballast in rough seas,* this is just one more elusive indicator with no price tag to set its value.

2. Intangible Values in and beyond the Workplace.

The intangibles of workplace education--what economists call "externalities"--have a broad reach. Many corporations today acknowledge social obligations--civic responsibilities to their communities and the larger society. This is a value position consistent with the values of a democratic society and with the role of corporations as agents chartered by society to produce the goods and services for society. These societal values are often demonstrated by company support for local arts, sports, or nonprofit service organizations. Although sometimes masked (or distorted) as public relations gestures, such activities have an underlying social value base.

Workplace education programs that rest on the two pillars of integrated, self-directed learning and shared decision

Frederick F. Reichheld comments on value creation in business:

The current approach might be called the profit theory. All business skills and competencies stand or fall on their capacity to contribute to profits. The new theory sees the fundamental mission of a business not as profit, but as value creation. It sees profit as a vital consequence of value creation--a means rather than an end, a result as opposed to a purpose.

The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value.

making have both immediate value within a company and broader social value stretching far beyond classroom or company.

The structure of small classes created a supportive environment for individuals and for the group. The magic of the new learning in each group was not the mysterious power of an extraordinary charismatic teacher. Common to all instructors, to all staff was simply an unwavering respect for the dignity and worth of each individual--and a belief in the potential of each one to grow.

As role models, instructors showed respect in a concrete way--listening attentively to each person. With this affirmation of personal dignity, individuals learned to listen to each other--to acknowledge the dignity and worth of each member of the group. In math, ESL, or writing courses, they gained new skill in interacting with each other.

This mutual respect and these listening skills first transferred directly to the workplace. Workers reported a very simple advantage: because they knew others' names--and knew something about others as individuals--they found it easier to ask questions, to make suggestions, to solve problems. They saw this rapport--this new level of comfort in interacting--as improving their performance. They reported coaching other people to show respect for and attention to others. They also reported a better understanding of diversity and a willingness to reduce stereotypes and other barriers to productive interactions. The ripple effects of classroom learning, however, permeated mono-cultural as well as multi-cultural sites.

Daniel Goleman comments on the role of emotions:

A view of human nature that ignores the power of emotions is sadly shortsighted. The very name homo sapiens, the thinking species, is misleading in light of the new appreciation and vision of the place of emotions in our lives that science now offers. As we all know from experience, when it comes to shaping our decisions and our actions, feeling counts every bit as much--and often more--that thought. We have gone too far in emphasizing the value and import of the purely rational--what IQ measures--in human life (p. 4).

Emotional Intelligence: Why It Can Matter More than IQ

Václac Havel comments on social values:

We have to abandon the arrogant belief that the world is merely a puzzle to be solved, a machine with instructions for use waiting to be discovered, a body of information to be fed into a computer in the hope that, sooner or later, it will spit out a universal solution.

It is my profound conviction that we have to release from the sphere of private whim such forces as a natural, unique and unrepeatable experience of the world, an elementary sense of justice, the ability to see things as others do, a sense of transcendental responsibility, archetypal wisdom, good taste, courage, compassion, and faith in the importance of particular measures that do not aspire to be a universal key to salvation. Such forces must be rehabilitated (p. 15[E]).

"The End of the Modern Era."

Because workers integrated this respect for others into their personal repertoire, effects extended far beyond the workplace. This report has a limited focus on workplace outcomes and, therefore, has omitted most references to other activities. Yet workers reported using new math, communication, or leadership skills in home tasks and family activities; in church, school, or recreational groups; in Red Cross rescue services or other volunteer groups; and in a wide range of educational settings. People who are energized to take charge of their own learning move in many worlds.

At its best, workplace education equips workers for multiple roles in an increasingly complex society that urgently needs more informed, more tolerant, and more skillful adults. When the "business of business" integrates adult learning as an integral component of operations, each company, its community, and the larger society benefit. At a fundamental level, a commitment to providing educational opportunities for all workers is rooted, not primarily in economics, but in democratic values. The quality of the commitment to workplace education, to the sweep of its spiral of learning, is both a litmus test and an affirmation of those values.

Summary: Contexts for Learning

The rapid pace of change today creates new interdependencies. At a micro-level, the competence of each worker influences productivity. Businesses are also indirectly influenced at a macro-level by the competence of each citizen. This ecological perspective--seeing the learner in multiple contexts--clarifies the spiraling benefits of strong workplace education programs.

Acknowledgments:

This reference list is a silent tribute to many friends who introduced some of these books to me and consistently helped me to integrate them into my thinking.

I wish to acknowledge, in particular, the late George B. Thomas, my dissertation advisor at the Harvard Graduate School of Education. In those days, he patiently steered me around false starts and writer's block. Through the years, he was a warm, witty, and challenging friend. Some of his views drift through these pages.

The staff members of the Casco Bay Partnership for Workplace recognize, I hope, how much I have drawn on their thoughtful reflections and generous assistance. Each person I interviewed welcomed me cordially and offered very helpful comments.

My brother and colleague Ken made pivotal contributions in multiple ways. I also wish to thank Nancy, Freda, Larry, Ellen, David, Nona, Bob, and other unnamed friends who undoubtedly chuckle at my unique assimilation of their ideas.

Miriam Clasby

BIBLIOGRAPHICAL ESSAY

This report draws primarily on the testimony of various stakeholders in the workplace education project. It has omitted footnotes or specific references to publications. One practical reason for this choice was to remove barriers--to make the report accessible to various audiences, including project participants. The omission of citations also reflected the style of project staff who wore their learning lightly. Finally, this choice reflected a value position: to assign a primary role to individuals at all levels; to provide a context for their stories; and to explore some of the meanings embedded in those stories.

Workplace education spans several distinct and vigorous academic traditions: the field of organizational development (and human resource development) and the field of adult learning (and the assessment of learning). The following list identifies a few key publications that influenced this report.

The selections illustrate different conceptual frameworks rather than specific applications of concepts or the most current state-of-the art. Because this brief list is cross-disciplinary, it is primarily an introduction to diverse types of analysis. Different readers will recognize different sources for concepts and interpretations. Those with expertise in any one field will note serious omissions--and inevitable personal priorities. Like any reference list, it is simply evidence of an individual effort to pursue various pathways towards insight and understanding.

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Bibliographical Essay, p. 70

Organizational Development: Selected References

The topic of corporate philosophy and mission-and the role of business in society--has been studied by Peter Drucker for more than fifty years. In *Post-Capitalist Society,* he explores implications of the emerging "knowledge society." More recently, in *The Loyalty Effect,* Frederick F. Reichheld challenges business philosophies that ignore the value of customers and workers.

Initiatives to promote teamwork and shared decision making in the workplace have attracted wide attention. Marvin Weisbord, in *Productive Workplaces,* describes historical shifts in views from workers as a "commodity" or cost to workers as problem-solvers or assets. Some authors focus on cultural factors and leadership roles: e.g., Edgar H. Schein, *Organizational Culture and Leadership* and John P. Kotter, *A Force for Change.* Peter M. Senge, in *The Fifth Discipline,* outlines features of a "learning organization"that encompass personal and interpersonal competencies as well as systems thinking.

Efforts to identify and promote worker competency are studied in *Organizational Capability* by David Ulrich and Dale Lake. In *Competence at Work,* Lyle M. Spencer and Signe M. Spencer, describe interview techniques to identify job competencies (and propose complex procedures for statistical assessments of competencies). Patricia McLagan's article "Shifting Sands: The Future Promise of Performance Models" offers new views on the nature and concept of work today and illustrates contributions of the American Society for Training and Development.

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The view of adults as self-directed learners gained widespread acceptance through Malcolm Knowles's classic, *The Adult Learner.* His emphasis on holistic and integrated learning receives support from several current research strands. Howard Gardner's *Multiple Intelligences* expands interpretations of human competence or "smartness." In *Emotional Intelligence,* Daniel Goleman summarizes recent neurological findings on the power of instinct and of emotional memories. The topic of confidence has been treated extensively in Alfred Bandura's study of self-efficacy. Kenneth Wexley and Gary Latham's *Developing and Training Human Resources in Organizations* provides an introduction to this research.

Narrative as a way of knowing has been explored by Jerome Bruner. In *Acts of Meaning,* he examines how people use personal stories to organize their views of themselves, of others, and their world. Nona Lyons, ed, *With Portfolio in Hand,* describes the portfolio process as an arena for critical reflection and a record of accomplishments.

Studies of work-related learning branch in different directions. In *Sculpting the Learning Organization.* Karen Watkins and Victoria Marsick identify formal and informal opportunities for self-directed learning in the workplace. Donald L. Kirkpatrick's *Evaluating Training Program* presents his well-established construct of four types of outcomes--reaction, learning, application, and impact. Kevin Hollenbeck's *Classrooms in the Workplace* uses case studies and survey data to address questions of organizational impact.

Bibliographical Essay, p. 71

Contemporary Challenges

Any categorization runs the risk of blurring boundaries. And some provocative sources or writings defy rigid boundaries, offering different perspectives or new horizons.

The National Institute for Literacy webpage opens the door to a variety of current literacy-related resources. It includes instructions for subscribing to a listserv dedicated to workplace education.

Writing for the general public, in "The Age of Social Transformation" Peter Drucker surveys a century of changes. He foresees redefinitions of the roles of the public sector of government, the private sector of business, and the social sector.

The views of Václav Havel, president of the Czech Republic, have been shaped by his experiences as dramatist, essayist, political prisoner, and public figure. Addressing a 1992 meeting of the World Economic Forum in Switzerland, he presented a trenchant summary of contemporary challenges that transcend national or ideological boundaries.

Scientific discoveries in quantum physics, chaos theory, and biology have unsettled the certitudes of Newton's orderly, predictable universe. Margaret Wheatley summarizes key findings and explores the practical implications for organizations--and for non-scientists. Her volume suggests new ways of thinking about contexts--about our world and its dynamics.

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